A1-F18AC-741-200

15 JANUARY 2003

TECHNICAL MANUAL

**ORGANIZATIONAL MAINTENANCE
TESTING AND TROUBLESHOOTING**

MISSION COMPUTER SYSTEM

**NAVY MODEL
F/A-18A AND F/A-18B
161353 AND UP**

N68936-01-D-0007

This manual supersedes A1-F18AC-741-200, dated 1 July 1992 thru Change 4, dated 1 January 2001.

PUBLISHED BY DIRECTION OF COMMANDER, NAVAL AIR SYSTEMS COMMAND

0801LP1021445

NATEC ELECTRONIC MANUAL

NUMERICAL INDEX OF EFFECTIVE WORK PACKAGES/PAGES

List of Current Changes

Original 0 . . . . 15 Jan 2003

Only those work packages/pages assigned to the manual are listed in this index. Insert Change __ , dated _____ . Dispose of superseded and deleted work packages/pages. Superseded and deleted classified work packages/pages shall be destroyed in accordance with applicable regulations. If changed pages are issued to a work package, insert the changed pages in the applicable work package. The portion of text affected in a changed or revised work package is indicated by change bars or the change symbol "R" in the outer margin of each column of text. Changes to illustrations are indicated by pointing hands or change bars, as applicable.

WP Number	Title	WP Number	Title
Title		009 00	Troubleshooting Procedure - Part 1
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005 00	Control-Converter C-10382/A	017 00	Troubleshooting Procedure - Part 9
006 00	Component Locator	018 00	Troubleshooting Procedure - Part 10
007 00	Circuit Breakers	019 00	Troubleshooting Procedure - Part 11
008 00	Troubleshooting Procedure	020 00	Troubleshooting Procedure - Part 12

Total number of pages in this manual is 170, consisting of the following:

WP/Page Number	Change Number	WP/Page Number	Change Number	WP/Page Number	Change Number	WP/Page Number	Change Number
Title	0	005 00		011 00		017 00	
A	0	1 - 9	0	1 - 4	0	1 - 3	0
TPDR-1	0	10 Blank	0	012 00		4 Blank	0
TPDR-2 Blank	0	006 00		1 - 4	0	018 00	
001 00		1 - 33	0	013 00		1 - 3	0
1	0	34 Blank	0	1 - 2	0	4 Blank	0
2 Blank	0	007 00		014 00		019 00	
002 00		1 - 4	0	1 - 5	0	1 - 3	0
1 - 7	0	008 00		6 Blank	0	4 Blank	0
8 Blank	0	1 - 37	0	015 00		020 00	
003 00		38 Blank	0	1 - 4	0	1 - 4	0
1 - 12	0	009 00		016 00			
004 00		1 - 2	0	1 - 4	0		
1 - 13	0	010 00					
14 Blank	0	1 - 2	0				

LIST OF TECHNICAL PUBLICATIONS DEFICIENCY REPORTS INCORPORATED

ORGANIZATIONAL MAINTENANCE

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1. The TPDRs listed below have been incorporated in this issue.

IDENTIFICATION NUMBER/ QA SEQUENCE NUMBER	LOCATION
09965–01–0008	WP 008 00, Page 24
30338–01–0002	WP 008 00, Page 24

ALPHABETICAL INDEX

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

MISSION COMPUTER SYSTEM

INTRODUCTION

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

MISSION COMPUTER SYSTEM

1. **PURPOSE.**

2. This manual provides the technician with the data required to do testing and troubleshooting of the system.

3. **REQUISITION AND AUTOMATIC DISTRIBUTION OF NAVAIR TECHNICAL MANUALS.**

4. Procedures to be used by Naval activities and other Department of Defense activities requiring NAVAIR technical manuals are defined in NAVAIR 00-25-100.

5. **MANUAL ISSUE DATE.**

6. The date on the title page is the copy freeze date. No additions, deletions, or changes are made after the manual issue date except last minute safety of flight or required maintenance changes. Data collected after the manual issue date will be included in later changes or revisions of the manual.

7. **EFFECTIVITIES.**

8. Effectivity notes on manual title pages, work package title pages, and within a work package indicate the aircraft or software program to which the data applies. If no effectivity note appears on the work package title page, the work package has the same effectivity as shown on the manual title page. The effectivity notes may use:

NOTE

Aircraft with model designator F/A-18B are the same type and model as TF/A-18A.

a. Type, model, and series

b. Bureau number (tail number)

c. Combination of type, model, series, and bureau numbers

d. Part number or serial number

e. Technical directive number

f. Configuration/identification number

9. The table shows examples of effectivity notes and their meanings:

Effectivity Note Examples

Effectivity Note	Definition
160777 AND UP	Applicable to all F/A-18A, F/A-18B, F/A-18C and F/A-18 for bureau numbers listed.
F/A-18A, F/A-18B	Applicable to all F/A-18A and F/A-18B.
F/A-18C, F/A-18D	Applicable to all F/A-18C and F/A-18D.
F/A-18A	Applicable to all F/A-18A, but not F/A-18B, F/A-18C and F/A-18D.

Effectivity Note Examples (Continued)

Effectivity Note	Definition
F/A-18B	Applicable to all F/A-18B, but not F/A-18A, F/A-18C, and F/A-18D.
F/A-18C	Applicable to all F/A-18C, but not F/A-18A, F/A-18B, and F/A-18D.
F/A-18D	Applicable to all F/A-18D, but not F/A-18A, F/A-18B, and F/A-18C.
F/A-18A, F/A-18C	Applicable to all F/A-18A and F/A-18C, but not to F/A-18B and F/A-18D.
F/A-18B, F/A-18D	Applicable to all F/A-18B and F/A-18D, but not to F/A-18A and F/A-18C.
F/A-18A 160775, 160777 THRU 160782	Only applicable to some bureau numbers of F/A-18A. Not applicable to any F/A-18B, even if an F/A-18B bureau number is within the numbers listed.
F/A-18C 163427, 163430 THRU 163456	Only applicable to some bureau numbers of F/A-18C. Not applicable to any F/A-18D, even if an F/A-18D bureau number is within the numbers listed.
F/A-18B 160784 AND UP	Only applicable to some bureau numbers of F/A-18B. Not applicable to any F/A-18A, even if an F/A-18A bureau number is within the numbers listed.
F/A-18D 163434 THRU 163457	Only applicable to some bureau numbers of F/A-18D. Not applicable to any F/A-18C, even if an F/A-18C bureau number is within the numbers listed.
160775 THRU 160785 BEFORE F/A-18 AFC 772	Applicable to F/A-18A and F/A-18B for bureau numbers listed, before modification by technical directive.
161213 AND UP; ALSO 160775 THRU 160785 AFTER F/A-18 AFC 772	Applicable to aircraft modified during production; also applicable when affected aircraft have been modified by technical directive.
160775 THRU 160785; WHEN NO. 2 CONTROL PANEL P/N XXXX-X IS INSTALLED	Applicable to F/A-18A and F/A-18B for bureau numbers listed if panel PIN XXXX-X is installed. (Configuration before AVC)
161213 AND UP; ALSO 160775 THRU 160785; WHEN NO. 2 CONTROL PANEL P/N XXXX-Y (AVC-102) IS INSTALLED	Applicable to aircraft modified during production; also applicable to aircraft components modified to the production configuration by technical directive. (Configuration after AVC)
P/N MBEU65101-9, MBEU65101-10 & MBEU65105-3	Applicable to assemblies which are interchangeable between aircraft.

Effectivity Note Examples (Continued)

Effectivity Note	Definition
ENGINE NO. 215101 THRU 215109	Applicable to assemblies which are interchangeable between aircraft, but configurations can not be identified by part number.
CONFIG/IDENT NUMBER 84A	The CONFIG/IDENT Number is the program load identification number which identifies the software program loaded in specific programmable units. Refer to A1-F18AC-SCM-000 for CONFIG/IDENT Number table 3.

10. **TECHNICAL DIRECTIVES.**

11. Technical directives are documents which direct the accomplishment and recording of a retrofit configuration or inspection to delivered aircraft, or aircraft components.

12. **AIRFRAME CHANGE (AFC) AND AIRBORNE TACTICAL SOFTWARE CHANGE (ASC).** Technical directives which change configuration of aircraft structure or equipment installation, i.e. AFC, will list aircraft bureau numbers in effectivity notes and show before and after the AFC. Technical directives which change configuration of operational flight programs (OFP), i.e. ASC, will list the OFP CONFIG/IDENT NUMBER in effectivity notes and show the latest two authorized OFP programs. See AFC and ASC effectivity examples in Effectivity Note Example Table.

13. **AIRCRAFT COMPONENT CHANGES.** Technical directives which change configuration of aircraft components, i.e. AAC, ACC, AVG, AYC, and PPC will list part numbers in the effectivities. See AVC effectivity examples in Effectivity Note Example table.

14. **HISTORICAL RECORD/RECORD OF APPLICABLE TECHNICAL DIRECTIVES.**

15. The technical directives affecting this manual are listed in the Record of Applicable Technical Directives of each affected work package. Because an ASC directs all aircraft be modified within 30 days, ASC's are not listed. When all affected aircraft are modified, the before configuration is removed from the manual, and the technical directive entry is removed from the each affected work package and entered in the Historical Record of Applicable Technical Directives.

16. **TECHNICAL PUBLICATIONS DEFICIENCY REPORT (TPDR).**

17. The TPDR (OPNAV FORM 4790/66) is the form for reporting errors and suspected omissions in the technical manuals. Reporting procedures are in OPNAVINST 4790.2 SERIES.

18. **QUALITY ASSURANCE PROCEDURES.**

19. Procedures or parts of procedures which require quality assurance inspection are identified by the letters (QA) after the applicable steps. When (QA) is assigned to a step or a heading which is immediately followed by sub steps, the inspection requirement is applicable to all sub steps.

20. When doing maintenance in any area, a visual inspection of the area will be made for cracks, corrosion and security of component installation before securing the area for flight.

21. **TEST PROCEDURES.**

22. Test procedures are done as part of malfunction isolation, during periodic inspection, or when correct system operation is to be verified.

23. Satisfactory completion of test procedures verifies correct system operation. Do steps in sequence. When doing system test procedures, make sure:

    a. System Required Components identified in procedure are installed.

    b. Related Systems Required identified in procedure are operative.

    c. Steps are done in sequence.

    d. Results are as shown in Normal Indication column, or do Remedy for Abnormal Indication.

    e. Each malfunction is corrected before going to next step by repeating portion of test procedure which failed.

24. **TROUBLESHOOTING.**

25. **TROUBLESHOOTING PROCEDURES.** These procedures provide a series of steps with a NO-YES col-

umn. These steps lead to corrective action for the malfunction. Troubleshooting procedures list the data below for use as an aid when doing procedural steps:

    a.   Reference to a system schematic.

    b.   Reference to a component locator.

    c.   List of Support equipment and materials required which will always be used in the procedure. Additional support equipment may be required.

    d.   An alphabetical list of components which could cause the malfunction.

26.   Troubleshooting procedures (logic trees) are referenced from a test procedure Remedy for Abnormal Indication column or from Fault Reporting Manual. Logic trees are written assuming the logic below:

    a.   If doing a test procedure, all steps testing functions before the failed step had normal indication.

    b.   For an abnormal indication, only one malfunction exists.

    c.   All replacement components are ready for installation.

27.   **CONTINUITY TESTING.** When doing continuity tests during troubleshooting, the items listed below must be tested, as applicable.

    a.   Loose electrical connectors and bent, broken, or recessed pins.

    b.   Continuity between specific pins per procedural step or system schematic.

    c.   Shorts between conductor and shield.

    d.   Shorts between conductor and surrounding pins on connectors.

    e.   Shield continuity per diagrams/system schematics.

28.   **TROUBLESHOOTING BEYOND BIT/SYSTEM TESTING.** This is required when any of the conditions listed below exist:

    a.   Malfunction was not detected by Built-ln Test (BIT).

    b.   Malfunction was not detected by a functional test procedure.

    c.   When a troubleshooting procedure did not correct the malfunction.

    d.   When a troubleshooting procedure does not exist.

29.   When any of the conditions listed in paragraph 28 exist, troubleshooting procedure/logic must then be determined. Use steps listed below to aid in determining procedure/logic:

    a.   Use referenced system schematic or select applicable system schematic for malfunction. Use schematic for troubleshooting beyond BlT analysis as listed below:

       (1)   Analyze interface of system components. Determine logic wiring and/or components which may cause the malfunction. Determine when an interfacing component could cause the malfunction.

       (2)   When malfunction can be caused by mission computer system signal interface, do applicable steps below:

          (a)   Analyze mission computer system integrated functions. Use REF CODES on system schematics for aid when interpreting computer software logic (A1-F18A( )-OLD-( ) series manuals).

          (b)   Memory inspect suspected Input/Output REF CODES (A1-F18AC-FIM-100).

    b.   Review VIDS/MAF (OPNAV 4790/60) in Aircraft Discrepancy Book for related malfunctions.

       (1)   Analyze system/related system maintenance codes reported by Nose Wheelwell Digital Display Indicator.

       (2)   Determine if aircraft components that have been replaced could cause malfunction.

       (3)   When a repeat malfunction exists, analyze previous maintenance action completed for the malfunction.

(a)   When component replacement is/was done, analyze component history as listed:

1)   Determine where component came from.

2)   Determine previous history of component (when available).

3)   Determine if similar malfunction occurred on another aircraft.

4)   Determine if replaced component could be causing existing malfunction.

5)   Determine if replacing component again would correct malfunction.

(b)   Determine if any rigging or control procedures that have been done could cause the malfunction.

(c)   Determine when rigging/boresight procedures should be done to verify system operation for malfunction.

30.   **TROUBLESHOOTING IMPROVE-MENTS.** When a troubleshooting procedure did not correct a malfunction and it is determined that additional or new troubleshooting is required, submit Technical Publications Deficiency Report (TPDR) providing the information listed below:

a.   Fault descriptor for A1-F18( )-FRM-000.

b.   Corrective action taken for malfunction.

c.   Logic used to isolate malfunction.

d.   Probable changes that could shorten troubleshooting time for malfunction.

31.   **DIAGRAMS.**

32.   System schematics are in A1-F18A( )-( )-500 series manuals.

33.   **ILLUSTRATED PARTS BREAK-DOWN.**

34.   Each Illustrated Parts Breakdown (IPB) in this manual has a parts list and illustration for the requisition, storage, authority for use and identification of parts. The illustration is integrated with, and

supports, both the maintenance procedure and the parts list within each work package.

35.   **PART NUMBER COLUMN.** Footnote symbols in the part number column are defined following the last part listed in each parts list (also see converted part numbers, this WP).

36.   **INDENTION.** The first entry in the description column of each parts list is the figure title. This figure title identifies the parts list with the related maintenance procedure and is shown in the first indent. All parts data required to support the specific maintenance procedure is below the figure title in the second indent.

37.   **COMMON NAMES.** The official nomenclature in the description column may not be the name commonly used for an item. If different from the official nomenclature, the common name is shown in parentheses in the description column immediately following the official nomenclature.

38.   **COMMERCIAL AND GOVERNMENT ENTITY CODES.** Entity code or manufacturer's name and address are shown in the Description column in parentheses after the nomenclature for the item. These codes are per the Commercial and Government Entity (CAGE) Handbook H4/H8 Series. No code indicates the item is a government standard part.

39.   **ATTACHING PARTS.** Attaching parts are identified by (AP) after the nomenclature of the item in the description column. Attaching parts are listed immediately following the part they attach.

40.   **SPECIAL HANDLING.** Items requiring special handling such as liquid oxygen components, magnetic control items or on-board liquid oxygen generating system (OBOGS) are identified by the acronym LOX for liquid oxygen, MAG for magnetic control items and OXYGEN for on-board liquid oxygen generating system (OBOGS) in the Description column, at the extreme right side.

41.   **CONVERTED PART NUMBERS.** Some part numbers appear in the Part Number column which are different than the manufacturer's part number. These are converted part numbers. The unconverted manufacturer's part number is shown in the Description column following the manufacturer's code. Always use the part number in the Part Number column when ordering parts. If an item is not available under the listing in the Part Number column, it may be ordered using the unconverted part number found in the Description column or by using the number found on the part. Examples of

special characters as they may appear in the Part Number and Description columns are shown below:

Part Number Column	Description Column	
PORM	±	(Plus or Minus)
DEG	°	(Degree)
E	e	(Lower case letter)
2	II	(Roman Numeral)
0.001	.001	(Decimal)

42. **SUPERSEDED PARTS.** Superseded part numbers have been removed from the Part Number column and placed in the Description column of the superseding part (for example - supersedes 74A582090-1003). This indicates that the superseded part is usable if available through salvage, but should not be requisitioned or made.

43. **REDESIGNED PARTS.** When the design of a part is changed to the extent that interchangeability is affected, the new part number will state in the description column, Replaces 74AXXXXX-XXXX. If the old part has continued application it will remain in the part number column following the new part. Usable on codes will be used to show usability. In addition, the explanatory notes ("Use until exhausted") for procureable parts and (Replaced by XXXXX) for nonprocureable parts will be in the description column of the old part.

44. **NEXT HIGHER ASSEMBLY.** Next higher assembly (NHA) data is not shown using indention. Next higher procurable assembly (NHPA) data is shown for part numbers that have a procurable NHA. The NHPA and its assigned Source, Maintenance and Recoverability (SM&R) code are in parentheses as the last entry in the Description column. Requisition the NHPA when the part listed in the Part Number column is not available from supply. The components of assemblies that require disassembly during removal from aircraft, are footnoted in the part number column.

45. **UNITS PER ASSEMBLY COLUMN (UPA).**
This column lists the total number of each part required per assembly or subassembly and are not necessarily the total number used in the end item of equipment. The

letters AR (As Required) are used for items such as shims when the requirement may vary.

46. **USABLE-ON CODES.** Applicable usable-on codes are identified on the final sheet of each parts list. No entry in the Use On column identifies parts are applicable to all configurations supported by this parts list.

47. **ALTERNATE OR EQUIVALENT PARTS.** An asterisk (*) in the Use On column identifies alternate parts or equivalent parts that are interchangeable. When a letter code is followed by an asterisk in the Use On column, only the parts with the same letter code are interchangeable. An alternate part may be used when preferred part is not available. The asterisk is omitted for the preferred part(s). Equivalent parts are fully interchangeable. No equivalent part is preferred over another. All equivalent parts are identified by asterisks.

48. **SOURCE, MAINTENANCE AND RECOVERABILITY (SM&R) CODE COLUMN.** The codes used in this column are assigned per NAVAIRINST 4423.3 SERIES and NAVSUPINST 4423.14 SERIES which contain definitions. A dash (-) is shown in the SM&R code column when no code has been assigned. The Aviation Supply Office P2300 series publication is to be used for the most current SM&R Code assignment information if doubt exists as to the validity of any SM&R Code listed in an IPB. Refer to figure 1 for SM&R code explanations.

49. **PARTS LIST INDEX MANUAL, A1-F18AC-IPB-450.** This manual has a numerical index of part numbers and a reference designation index for use with aircraft organizational maintenance manuals. When reference designations or part numbers are known, the index locates specific maintenance instructions and parts data.

50. **NAVY (AN) STANDARD/COMMON NAME NOMENCLATURE.**

51. When an item has both Navy (AN) standard and common name nomenclature assigned, the common name nomenclature will be used in text and on illustrations. Full Navy (AN) standard nomenclature will be used in the Illustrated Parts Breakdown (IPB).

SOURCE (D012)				MAINTENANCE				
				USE (D013A)		REPAIR (D013B)		
1st POSITION		2nd POSITION		3rd POSITION		4th POSITION		
P	PROCURE	A	REPLENISH	O	REPLACE OR USE AT ORGANIZATIONAL LEVEL	Z	NO REPAIR (CONSUMABLE)	
		B	INSURANCE					
		C	CURE-DATED					
		D	INITIAL	F H G	REPLACE OR USE AT IMA LEVEL	B	RECONDITION BY ADJUSTMENT, CALIBRATION, LUBRICATION, PLATING, ETC.	
		E	END ITEM GSE/STOCKED					
		F	GSE/NOT STOCKED					
K	REPAIR KIT COMPONENT	F	ORG/IMA	L	REPLACE OR USE AT SPECIALIZED IMA	O	REPAIR AT ORGANIZATIONAL LEVEL	
		D	DEPOT					
		B	BOTH KITS					
M	MANUFACTURE	O	ORGANIZATIONAL	D	REPLACE OR USE AT DEPOT	F H G	REPAIR AT IMA LEVEL	
		F	AFLOAT (INTERMEDIATE)					
		H	ASHORE (INTERMEDIATE)					
A	ASSEMBLE	G	BOTH (INTERMEDIATE)					
		D	DEPOT					
X	MISC	A	REQUEST NHA			L	REPAIR AT SPECIALIZED IMA	
		B	OBTAIN FROM SALVAGE OR ONE TIME BUY	Z	NOT REQUIRED THIS APPLICATION	D	REPAIR AT DEPOT OR COMMERCIAL	
		C	DIAGRAMS-SCHEMATICS, INSTALL DWGS					

RECOVERABILITY (D013C)		SERVICE OPTION (D012A)	
5th POSITION		6th POSITION	
O	REPAIRABLE ITEM. CONDEMN AT ORGANIZATIONAL LEVEL.	1 2 3	APPLIES TO ENGINES ONLY. IDENTIFIES THE HIGHEST (1) TO LOWEST (3) LEVEL OF MAINTENANCE WHICH CAN REPLACE (3rd POSITION OF SM&R CODE) THE ITEM.
F H G	REPAIRABLE ITEM. CONDEMN AT INTERMEDIATE LEVEL INDICATED.	4 5 7	SAME AS ABOVE. IN ADDITION, ITEM IS A FLR WITH A UNIT COST OF OVER $5000. THESE CODES ARE NO LONGER ASSIGNED TO NEW, NON-FAMILY RELATED ITEMS.
L	REPAIRABLE ITEM. CONDEMN AT SPECIALIZED INTERMEDIATE LEVEL.	6	NORMALLY PROCURED AND STOCK NUMBERED BUT ORGANIC CAPABILITY EXISTS FOR EMERGENCY STOP-GAP REQUIREMENTS.
		E	END-TO-END TEST REQUIRED BY IMA PRIOR TO BCM ACTION.
D	REPAIRABLE ITEM. CONDEMN AT DEPOT OR CONTRACTOR FACILITY.	J	FLR OR CONSUMABLE ITEM. CHANGE 5th POSITION SM&R CODE TO "D" UNDER PICA/SICA. NAVAIR APPROVAL REQUIRED.
		8	SAME AS "J" ABOVE EXCEPT USED FOR ENGINES ONLY. APPLIES TO 2nd LEVEL OF IMA.
A	SPECIAL HANDLING REQUIRED. CONTACT ITEM MANAGER FOR DISPOSAL INSTRUCTIONS	9	SAME AS "J" ABOVE EXCEPT USED FOR ENGINES ONLY. APPLIES TO 3rd LEVEL OF IMA.
		M	ITEM IS A FLR WITH A UNIT COST OF OVER $5000. THESE CODES ARE NO LONGER ASSIGNED TO NEW, NON-FAMILY RELATED ITEMS.
Z	NON-REPAIRABLE ITEM. CONDEMN AT LEVEL IN 3rd POSITION.	N	ASSIGNED TO XB SOURCE CODE AND INDICATES ITEM IS PROCURED LOCALLY. NOT STOCKED IN THE SUPPLY SYSTEM.
		T	ASSIGNED TO TRAINING DEVICES WITH SOURCE CODE OF "PD". INDICATES ITEM IS NOT A PROCURABLE SPARE. NSN IS ASSIGNED ONLY TO PERMIT VISIBILITY OF REPAIR PART RELATIONSHIP.

Figure 1. SM&R Code Explanation

ORGANIZATIONAL MAINTENANCE

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DIGITAL DATA COMPUTER NO. 1 AND NO. 2

MISSION COMPUTER SYSTEM

Reference Material

Line Maintenance Procedures A1-F18AC-LMM-000

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	—	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	—
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Power Up Test

Procedure	Normal Indication	Remedy for Abnormal Indication
System Required Components Digital Data Computer No. 1 Digital Data Computer No. 2 Left Mux Bus Impedance Matching Network MC/HYD ISOL Control Panel Assembly Right Mux Bus Impedance Matching Network **Related Systems Required** Avionics Cooling System Electrical Systems Maintenance Status Display and Recording System Multipurpose Display Group **Support Equipment Required** None		

Table 1.   Power Up Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
Materials Required
None
NOTE
Radar System Pantograph Assembly must be installed/connected prior to doing tests (A1-F18AC-742-300, WP013 00). If a malfunction occurs during this test, make sure circuit breakers shown in WP007 00 are closed. For component locator, refer to WP006 00.
a. Observe WPN SYS FAIL indicator on nose wheelwell digital display indicator.	WPN SYS FAIL indicator is black (not latched).	If latched, do built-in test/reset procedure (A1-F18AC-LMM-000).
b. Apply electrical power (A1-F18AC-LMM-000).		
c. On GND PWR control panel assembly, set and hold 1 and 2 switch to B ON for 3 seconds.	Switch remains on (latched).	1. If switch unlatches in 10 to 30 seconds, apply external cooling air (A1-F18AC-LMM-000). 2. If both switches do not remain on, do Ground Power Switching System Test (A1-F18AC-420-200, WP006 00). 3. If one switch does not remain on, replace GND PWR Control Panel Assembly (A1-F18AC-420-300, WP023 00).
d. On left and right Digital Display Indicators IP-1317( ) (LDDI and RDDI), set power switch to DAY or NIGHT and allow 2 minute warmup. Adjust BRT and CONT controls for best display.	1. LDDI and RDDI have display and center pushbutton switch on bottom row is labeled MENU (fig 1).	1. No display on LDDI, F/A-18A, do table 1 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 1 (A1-F18AC-745-200, WP007 00). 2. No display on RDDI, F/A-18A, do table 2 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 2 (A1-F18AC-745-200, WP007 00). 3. If STANDBY is displayed, F/A-18A, do table 2 (A1-F18AC-745-200, WP004 00). F/A-18B, do table 2 (A1-F18AC-745-200, WP005 00). 4. If BRT or CONT controls do not affect display, replace left or right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).

Table 1.   Power Up Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
	2. MC1 caution is not displayed.	1. Reload MC1 OFP (A1-F18AC-SCM-000, WP006 00). 2. If reload is successful, then repeat steps a through d.2. 3. If MC1 caution still exists, do table 2.
	3. MC2 caution is not displayed.	1. Reload MC2 OFP (A1-F18AC-SCM-000, WP006 00). 2. If reload is successful, then repeat steps a through d.2. 3. If MC2 caution still exists, do table 3.
e. On LDDI and RDDI, set power switch to OFF. f. Remove electrical power (A1-F18AC-LMM-000). g. Read and record failure codes displayed on nose wheelwell digital display indicator (A1-F18AC-LMM-000).	Code 029 is not displayed.	Replace Digital Data Computer No. 2 (A1-F18AC-741-300, WP004 00).

Table 2.   MC1 Caution Displayed On Digital Display Indicator IP-1317(   )

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

AC/DC Power Schematic (A1-F18AC-741-500, WP009 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Table 2.   MC1 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Malfunction is caused by one of the items below:

    Aircraft Wiring
    Digital Data Computer No. 1
    GND PWR Control Panel Assembly
    MC/HYD ISOL Control Panel Assembly
    No. 7 Circuit Breaker/Relay Panel Assembly

Procedure	No	Yes

CAUTION

    To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale.   Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

NOTE

    The question used in logic tree "Does continuity exist" means to test for the items listed below:

1. Pin to pin test per procedural step.
2. Shorts to ground.
3. Shorts between surrounding pins on connectors.
4. Shorts between shield and conductors.
5. Shield continuity.

a.   Do the substeps below:

    (1)   On left and right digital display indicators (LDDI and RDDI), set power switch to OFF.

    (2)   On MC/HYD ISOL control panel assembly, set MC switch to 2 OFF.

    (3)   On GND PWR control panel assembly, set 1 and 2 switches to AUTO.

    (4)   On GND PWR control panel assembly, set 1 and 2 switches to B ON.

    (5)   On LDDI and RDDI, set power switch to DAY or NIGHT and allow 2 minutes for warmup.   Adjust BRT and CONT controls for best display.

    (6)   Is MC1 Caution displayed on LDDI? . . . .   **b**   **n**

b.   Read and record failure codes displayed on nose wheelwell digital display indicator (A1-F18AC-LMM-000).   Is ⬜1▶ code 32 or ⬜2▶ code 050 displayed? . . . .   **c**   **j**

c.   Do the substeps below:

    (1)   Open door 10L (A1-F18AC-LMM-010).

    (2)   On no. 7 circuit breaker/relay panel assembly, is circuit breaker 83CBC006, 83CBC007, or 83CBC008 tripped? . . . .   **d**   **h**

Table 2.   MC1 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Procedure	No	Yes
d. Do the substeps below:		
(1) Open door 13L (A1-F18AC-LMM-010).		
(2) Turn off electrical power (A1-F18AC-LMM-000).		
(3) Disconnect 83P-E001B from digital data computer no. 1.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		

(6)   Does 115vac exist from:
       83P-E001B Pin 13 to 83P-E001B Pin 10
       83P-E001B Pin 12 to 83P-E001B Pin 10
       83P-E001B Pin 11 to 83P-E001B Pin 10? ....
	e	j

e. Did 115vac exist at any of the pins tested in step d?	f	i
f. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Does continuity exist from 83P-E001B pin 10 to ground?	k	g
g. Do the substeps below:		
(1) On no. 7 circuit breaker/relay panel assembly, open circuit breaker 1CBC048.		
(2) Turn on electrical power (A1-F18AC-LMM-000).		
(3) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(4) Does 115vac exist from 83P-E001B pin 13 to 83P-E001B pin 10?	m	l
h. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 13L (A1-F18AC-LMM-010).		
(3) Disconnect 83P-E001B from digital data computer no. 1		
(4) Close tripped circuit breaker.		
(5) Turn on electrical power (A1-F18AC-LMM-000).		
(6) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(7) Does circuit breaker trip?	j	o
i Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-C057D from no. 7 circuit breaker/relay panel assembly.		

Table 2.   MC1 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Procedure	No	Yes
(3) Turn on electrical power (A1-F18AC-LMM-000).		
(4) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(5) Does 115vac exist from: 52J-C057D pin 63 to ground 52J-C057D pin 64 to ground 52J-C057D pin 65 to ground?	p	k
j. Replace Digital Data Computer No. 1 (A1-F18AC-741-300, WP003 00) and do step q.	-	-
k. Isolate defective aircraft wiring (A1-F18A( )-WDM-000) and do step q.	-	-
l. Replace MC/HYD ISOL Control Panel Assembly (A1-F18AC-741-300, WP008 00) and do step q.	-	-
m. Repair GND PWR Control Panel Assembly (A1-F18AC-420-300, WP023 00) and do step q.	-	-
n. Do the substeps below:		
(1) Make sure radar pantograph assembly (A1-F18AC-742-300, WP013 00) is installed and connected.		
(2) Reload digital data computer no. 1 operational flight program (A1-F18AC-SCM-000, WP006 00).		
(3) Repeat steps a.1 through a.5.		
(4) Is MC1 caution displayed on LDDI?	q	j
o. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-C057D from no. 7 circuit breaker/relay panel assembly.		
(3) Does short to ground exist on 83P-E001B pin 11, 12 or 13?	p	k
p. Isolate and repair no. 7 Circuit Breaker/Relay Panel Assembly (A1-F18AC-420-300, WP027 00) and do step q	-	-
q. If disconnected or opened during this procedure, make sure the items below are connected or closed:		
(1) 83P-E001B		
(2) 52P-C057D		
(3) 1CBC048		
(4) Door 10L		
(5) Door 13L	-	-
LEGEND		
1 ▸ F/A-18A before F/A-18 AFC 253 or F/A–18 AFC 292 and F/A–18B. 2 ▸ F/A-18A 162394 thru 163175 after F/A–18 AFC 253 or F/A–18 AFC 292.		

Table 3.   MC2 Caution Displayed On Digital Display Indicator IP-1317(   )

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

AC/DC Power Schematic (A1-F18AC-741-500, WP009 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Digital Data Computer No. 2
MC/HYD ISOL Control Panel Assembly
No. 2 Circuit Breaker/Relay Panel Assembly
No. 2 Relay Panel Assembly

Procedure	No	Yes

CAUTION

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale.   Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

NOTE

The question used in logic tree "Does continuity exist" means to test for the items listed below:

1.   Pin to pin test per procedural step.
2.   Shorts to ground.
3.   Shorts between surrounding pins on connectors.
4.   Shorts between shield and conductors.
5.   Shield continuity.

a.   Do the substeps below:

   (1)   On left and right digital display indicators (LDDI and RDDI), set power switch to OFF.

   (2)   On MC/HYD ISOL control panel assembly, set MC switch to 1 OFF.

Table 3.   MC2 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Procedure	No	Yes
(3) On GND PWR control panel assembly, set 1 and 2 switches to AUTO.		
(4) On GND PWR control panel assembly, set 1 and 2 switches to B ON.		
(5) On LDDI and RDDI, set power switch to DAY or NIGHT and allow 2 minutes for warmup. Adjust BRT and CONT controls for best display.		
(6) Is MC2 Caution displayed on LDDI?	b	n
b. Read and record failure codes displayed on nose wheelwell digital display indicator (A1-F18AC-LMM-000). Is ▢1▶ code 036 or ▢2▶ code 054 displayed?	c	p
c. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 10R (A1-F18AC-LMM-010).		
(3) On no. 2 circuit breaker panel assembly, is circuit breaker 83CBD009, 83CBD010, or 83CBD011 tripped?	d	h
d. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 14R (A1-F18AC-LMM-010).		
(3) Disconnect 83P-F002B from digital data computer no. 2.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(6) Does 115vac exist from: 83P-F002B pin 13 to 83P-F002B pin 10 83P-F002B pin 12 to 83P-F002B pin 10 83P-F002B pin 11 to 83P-F002B pin 10?	e	p
e. Did 115vac exist at any of the pins tested in step d?	f	i
f. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Does continuity exist from 83P-F002B pin 10 to ground?	q	g
g. Do the substeps below:		
(1) Open door 10L (A1-F18AC-LMM-010).		
(2) On no. 7 circuit breaker/relay panel assembly, open circuit breaker 1CBC048.		
(3) Turn on electrical power (A1-F18AC-LMM-000).		
(4) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(5) Does 115vac exist from 83P-F002B pin 13 to pin 10?	s	r

Table 3.   MC2 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

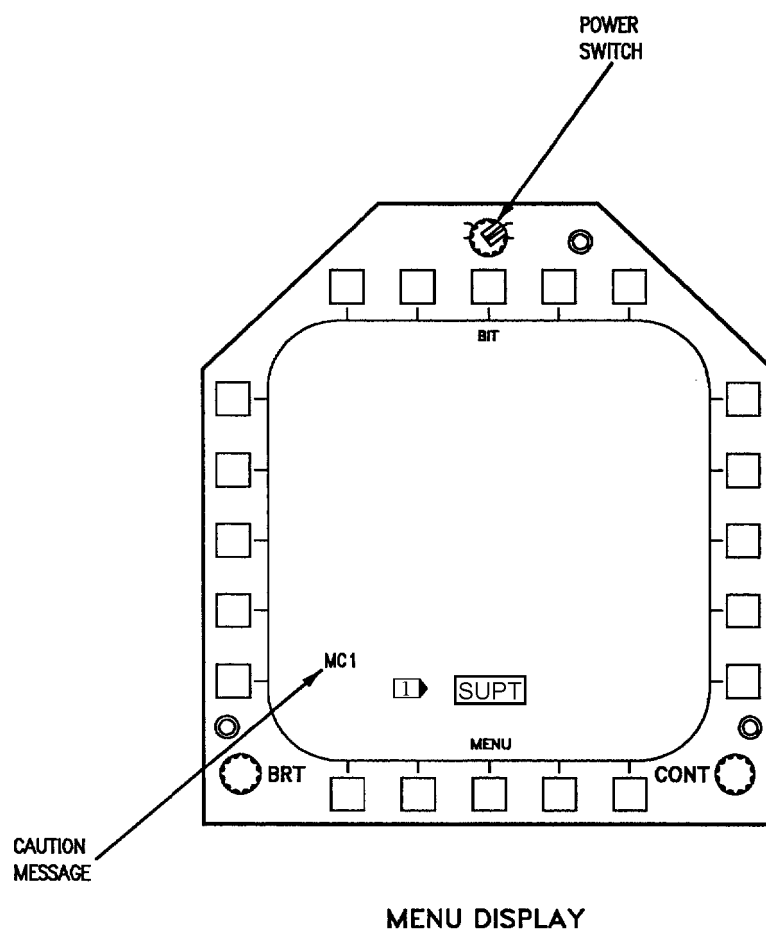| Procedure	No	Yes
h. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 83P-F002B from digital data computer no. 2.		
(3) Close tripped breakers.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(6) Does circuit breaker trip?	p	l
i. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058E from no. 2 relay panel assembly.		
(3) Does continuity exist from:		

52P-F058E pin 59 to 83P-F002B pin 13
       52P-F058E pin 48 to 83P-F002B pin 12
       52P-F058E pin 37 to 83P-F002B pin 11? . . . .
	q	j

j. Do the substeps below:		
(1) Disconnect 52P-D024D from no. 2 circuit breaker panel assembly.		
(2) Does continuity exist from:		
On 161353 THRU 161359		

52P-D024D pin 6 to 52P-F058E pin 10
       52P-D024D pin 7 to 52P-F058E pin 9
       52P-D024D pin 8 to 52P-F058E pin 16? . . . .
	q	k

On 161360 AND UP		

52P-D024D pin 49 to 52P-F058E pin 10
       52P-D024D pin 48 to 52P-F058E pin 9
       52P-D024D pin 47 to 52P-F058E pin 16? . . . .
	q	k

k. Do the substeps below:		
(1) Turn on electrical power (A1-F18AC-LMM-000).		
(2) Does 115vac exist from:		
On 161353 THRU 161359		

52J-D024D pin 6 to ground
       62J-D024D pin 7 to ground
       52J-D024D pin 8 to ground? . . . .
	s	t

On 161360 AND UP		

52J-D024D pin 49 to ground
       52J-D024D pin 48 to ground
       52J-D024D pin 47 to ground? . . . .
	s	t

Table 3. MC2 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Procedure	No	Yes
l. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058E from no. 2 relay panel assembly.		
(3) Close tripped circuit breaker.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(6) Does circuit breaker trip?	m	o
m. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Does a short to ground exist on 52P-F058E pins 59, 48 or 37?	t	q
n. Do the substeps below:		
(1) Make sure radar pantograph assembly (A1-F18AC-742-300, WP013 00) is installed and connected.		
(2) Reload digital data computer no. 2 operational flight program (A1-F18AC-SCM-000, WP006 00).		
(3) Repeat steps a.1 through a.5.		
(4) Is MC2 caution displayed on LDDI?	u	p
o. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-D024D from no. 2 circuit breaker panel assembly.		
(3) Does continuity exist from:		
On 161353 THRU 161359		

52P-D024D pin 6 to 52P-F058E pin 10
      52P-D024D pin 7 to 52P-F058E pin 9
      52P-D024D pin 8 to 52P-F058E pin 16? . . . .
	q	s

On 161360 AND UP		

52P-D024D pin 49 to 52P-F058E pin 10
      52P-D024D pin 48 to 52P-F058E pin 9
      52P-D024D pin 47 to 52P-F058E pin 16? . . . .
	q	s

p. Replace Digital Data Computer No. 2 (A1-F18AC-741-300, WP004 00) and do step u.	-	-
q. Isolate defective wiring (A1-F18A( )-WDM-000) and do step u.	-	-
r. Replace MC/HYD ISOL Control Panel Assembly (A1-F18AC-741-300, WP008 00) and do step u.	-	-

Table 3.   MC2 Caution Displayed On Digital Display Indicator IP-1317(   ) (Continued)

Procedure	No	Yes
s. Repair No. 2 Circuit Breaker Panel Assembly (A1-F18AC-420-300, WP024 00) and do step u. . . .	-	-
t. Repair No. 2 Relay Panel Assembly (A1-F18AC-420-300, WP033 00) and do step u.	-	-
u. If disconnected or opened during this procedure, make sure the items below are connected or closed:		
(1) 83P-F002B		
(2) 1CBC048		
(3) 52P-F058E		
(4) 52P-D024D		
(5) Door 10R		
(6) Door 10L		
(7) Door 14R	-	-
LEGEND		
☐1▶ F/A-18A before F/A-18 AFC 253 or F/A–18 AFC 292 and F/A–18B. ☐2▶ F/A-18A 162394 thru 163175 after F/A–18 AFC 253 or F/A–18 AFC 292.		

MENU DISPLAY

LEGEND

1. F/A-18A 162394 THROUGH 163175
AFTER F/A-18 AFC 253 OR F/A-18 AFC 292

003001

Figure 1.   Digital Display Indicator IP-1317(   ) Display

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

ELECTRONIC EQUIPMENT CONTROL C-10380/ASQ

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

None

Table 1.   Lamp and Switch Test

Procedure	Normal Indication	Remedy for Abnormal Indication
System Required Components		
Control-Converter		
Digital Data Computer No. 1		
Electronic Equipment Control		
Left Mux Bus Impedance Matching Network		
Rear Electronic Equipment Control		
Right Mux Bus Impedance Matching Network		
Related Systems Required		
Avionics Cooling System		
Electrical System		
Maintenance Status Display and Recording System		
Multipurpose Display Group		
Support Equipment Required		
None		

Table 1.   Lamp and Switch Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
Materials Required		
None		
NOTE		
If a malfunction occurs during this test, make sure circuit breakers shown in WP007 00 are closed.		
For component locator, refer to WP006 00.		
a. Apply electrical power (A1-F18AC-LMM-000).		
b. On GND PWR control panel assembly, set and hold 1 and 2 switches to B ON for 3 seconds.	Switches remain on (latched).	1. If switches unlatch in 10 to 30 seconds, apply external cooling air to aircraft. 2. If switches do not remain on, troubleshoot (A1-F18AC-420-200, WP006 00).
c. On left and right Digital Display Indicators IP-1317( ), (LDDI and RDDI), set power switch to DAY or NIGHT and allow 2 minute warm-up. Adjust BRT and CONT controls for best display.	LDDI and RDDI have display and center pushbutton switch on bottom row that is labeled MENU (fig 1).	1. No display on LDDI, F/A-18A, do table 1 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 1 (A1-F18AC-746-200, WP007 00). 2. No display on RDDI, F/A-18A, do table 2 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 2 (A1-F18AC-745-200, WP007 00). 3. If STANDBY is displayed, F/A-18A, do table 2 (A1-F18AC-745-200, WP004 00). F/A-18B, do table 2 (A1-F18AC-745-200, WP005 00). 4. If BRT or CONT controls do not affect display, replace left or right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).
d. On RDDI press and release MENU pushbutton switch.	RDDI has menu display (fig 1).	Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).

Table 1. Lamp and Switch Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
e. Press and release BIT pushbutton switch.	RDDI has built-in test (BIT) control display (fig 1).	Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-746-300, WP004 00).
f. Press and release DSPL/EPI/ UFC pushbutton switch.	1. See fig 2 for below indications: a. For approximately 5 seconds, the first lamp test display (all electronic equipment control (equipment control) and rear equipment control segments of 7 segment displays, all cues and outer segments of 16 segment displays) is lit. b. After the 5 seconds, the first lamp display changes to the second lamp test display (16 segment displays change to all inner segments) and lights for 5 seconds. 2. RDDI has test pattern display (fig 1).	1. If wrong display or no display on equipment control, do table 3. 2. If wrong display or no display on rear equipment control, do table 4. 3. If wrong display on both equipment controls or no display on both equipment controls, replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00). Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).
g. Wait 20 seconds, then press and release STOP pushbutton switch.	RDDI has BIT control display (fig 1).	Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).
h. Press and release MAINT pushbutton switch.	RDDI has maintenance BIT control display (fig 1).	Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).
i. On F/A-18B rear equipment control, be sure both VOL controls are on.		
j. On RDDI, press and release UFC pushbutton switch.	Equipment control and rear equipment control have switch test displays as listed (fig 2): a. Option 1 display-blank. b. Option 2 display-COM 1 (if comm 1 is on) or blank. c. Option 3 display-COM 2 (if comm 2 is on) or blank.	1. If wrong display or no display on equipment control, replace Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP006 00). 2. If wrong display or no display on rear equipment control, replace rear Electronic Equipment.

Table 1.   Lamp and Switch Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
	d. Option 4 display-ADF 1 (if ADF switch is in 1) or blank. e. Option 5 display-ADF 2 (if ADF switch is in 2) or blank. f. COMM 1 and COMM 2 channel display-comm channels selected.	3. If wrong display on both equipment controls, replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00).
k. Activate all equipment control pushbutton switches or switch in order per table 2 and observe option 1 display.	Option 1 display is per table 2.	1. If wrong display or no display on equipment control, replace Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP006 00). 2. If wrong display or no display on rear equipment control, replace Rear Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP009 00).
l. On F/A-18B, do step k for rear equipment control. m. On LDDI and RDDI, set power switch to OFF. n. Remove electrical power (A1-F18AC-LMM-000).		

Table 2.   Switch Test Option 1 Displays

Pushbutton Switch/Switch	Char 1	Char 2	Char 3	Char 4
A/P function select	A	/	P	
IFF function select	I	F	F	
TCN function select	T	C	N	
ILS function select	I	L	S	
D/L function select	D	/	L	
BCN function select	B	C	N	
ON/OFF	O	N		
EMCON select	E	M	C	
OPTION 1 select	O	P	T	1
OPTION 2 select	O	P	T	2
OPTION 3 select	O	P	T	3
OPTION 4 select	O	P	T	4
OPTION 5 select	O	P	T	5

Table 2. Switch Test Option 1 Displays (Continued)

Pushbutton Switch/Switch	Char 1	Char 2	Char 3	Char 4
COMM 1 channel selects (pull)	C	O	M	1
COMM 2 channel selects (pull)	C	O	M	2
I/P	I	/	P	
Keyboard 0	0			
Keyboard 1	1			
Keyboard 2	2			
Keyboard 3	3			
Keyboard 4	4			
Keyboard 5	5			
Keyboard 6	6			
Keyboard 7	7			
Keyboard 8	8			
Keyboard 9	9			
Keyboard CLR	C	L	R	
Keyboard ENT	E	N	T	R

Table 3. Wrong Display or No Display on Electronic Equipment Control

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

Electronic Equipment Control C-10380/ASQ Built-In Test Schematic (A1-F18AC-741-500, WP011 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

    Aircraft Wiring
    Control Converter
    Electronic Equipment Control
    Head-Up Display

Table 3.   Wrong Display or No Display on Electronic Equipment Control (Continued)

Procedure	No	Yes

<div align="center">

‑‑‑‑‑‑‑‑‑‑‑
CAUTION
‑‑‑‑‑‑‑‑‑‑‑

</div>

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale. Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

<div align="center">

NOTE

</div>

The question used in logic tree "Does continuity exist" means to test for the items listed below:

1.   Pin to pin test per procedural step.
2.   Shorts to ground.
3.   Shorts between surrounding pins on connectors.
4.   Shorts between shield and conductors.
5.   Shield continuity.

a.   Do substeps below:

   (1)   Do Control-Converter C-10382/A Test (WP005 00).

   (2)   Does control-converter pass test? . . . .   **b**   **c**

b.   Replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00). . . . .   -   -

c.   Do substeps below:

   (1)   Turn off electrical power (A1-F18AC-LMM-000).

   (2)   Open door 13R (A1-F18AC-LMM-010).

   (3)   Disconnect 82P-F001A and 82P-F001B from control-converter.

   (4)   Remove Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP006 00).

   (5)   Does continuity exist from:
     82P-F001B pin 51 to J2 pin 25
     82P-F001B pin 52 to J2 pin 26
     82P-F001B pin 73 to J2 pin 27
     82P-F001B pin 74 to J2 pin 28
     82P-F001B pin 62 to J2 pin 23
     82P-F001B pin 63 to J2 pin 24
     82P-F001B pin 26 to J2 pin 29
     82P-F001B pin 27 to J2 pin 30
     82P-F001A pin 19 to J2 pin 20
     82P-F001A pin 21 to J2 pin 20
     82P-F001A pin 20 to J2 pin 4
     82P-F001A pin 35 to J2 pin 4
     82P-F001A pin 17 to J2 pin 21
     82P-F001A pin 18 to J2 pin 5? . . . .   **d**   **e**

Table 3.   Wrong Display or No Display on Electronic Equipment Control (Continued)

Procedure	No	Yes
d. Do substeps below:		
(1) Remove Head-Up Display (A1-F18AC-745-300, WP003 00).		
(2) Open windshield (A1-F18AC-LMM-000).		
(3) Does continuity exist from:		
79P-J001B pin 69 to 82P-F001B pin 51		
79P-J001B pin 83 to 82P-F001B pin 52		
79P-J001B pin 71 to 82P-F001B pin 73		
79P-J001B pin 85 to 82P-F001B pin 74		
79P-J001B pin 67 to 82P-F001B pin 62		
79P-J001B pin 81 to 82P-F001B pin 63		
79P-J001B pin 73 to 82P-F001B pin 26		
79P-J001B pin 87 to 82P-F001B pin 27		
79P-J001B pin 46 to 82P-F001A pin 19		
79P-J001B pin 57 to 82P-F001A pin 21		
79P-J001B pin 48 to 82P-F001A pin 20		
79P-J001B pin 61 to 82P-F001A pin 35		
79P-J001B pin 50 to 82P-F001A pin 17		
79P-J001B pin 52 to 82P-F001A pin 18?	f	g
e. Replace Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP006 00) and do step h.	-	-
f. Isolate defective aircraft wiring (A1-F18A( )-WDM-000) and do step h.	-	-
g. Replace Head-Up Display (A1-F18AC-745-300, WP003 00) and do step h.	-	-
h. If disconnected, removed or opened during this procedure, make sure the items listed below are connected, installed or closed:		
(1) Control Converter		
(2) Electronic Equipment Control		
(3) Head-Up Display		
(4) Windshield		
(5) 82P-F001A		
(6) 82P-F001B		
(7) Door 13R	-	-

Table 4.   Wrong Display or No Display on Rear Electronic Equipment Control

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or
Type Designation   **Nomenclature**

77/BN   Multimeter

Materials Required

None

NOTE

Electronic Equipment Control C-10380/ASQ Built-In-Test Schematic (A1-F18AC-741-500, WP011 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Control Converter
Rear Electronic Equipment Control

Procedure	No	Yes

CAUTION

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale. Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

NOTE

The question used in logic tree "Does continuity exist" means to test for the items listed below:

1.   Pin to pin test per procedural step.
2.   Shorts to ground.
3.   Shorts between surrounding pins on connectors.
4.   Shorts between shield and conductors.
5.   Shield continuity.

Table 4.   Wrong Display or No Display on Rear Electronic Equipment Control
(Continued)

Procedure	No	Yes
a. Do substeps below:		
(1) Do Control-Converter C-10382/A Test (WP005 00).		
(2) Does control-converter pass test?	b	c
b. Replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00).	-	-
c. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 13R (A1-F18AC-LMM-010).		
(3) Disconnect 82P-F001A and 82P-F001B from control-converter.		
(4) Remove rear Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP009 00).		
(5) Does continuity exist from:		

82P-F001A pin 9 to 76J-L028 pin 21
    82P-F001A pin 11 to 76J-L028 pin 20
    82P-F001A pin 10 to 76J-L028 pin 14
    82P-F001A pin 12 to 76J-L028 pin 4
    82P-F001B pin 55 to 76J-L028 pin 26
    82P-F001B pin 56 to 76J-L028 pin 25
    82P-F001B pin 78 to 76J-L028 pin 27
    82P-F001B pin 77 to 76J-L028 pin 28
    82P-F001B pin 67 to 76J-L028 pin 23
    82P-F001B pin 66 to 76J-L028 pin 24
    82P-F001B pin 37 to 76J-L028 pin 29
    82P-F001B pin 38 to 76J-L028 pin 30? . . . .
	d	e

d. Isolate defective aircraft wiring (A1-F18A( )-WDM-000) and do step f.	-	-
e. Replace Rear Electronic Equipment Control C-10380/ASQ (A1-F18AC-741-300, WP009 00) and do step f.	-	-
f. If disconnected, removed or opened during this procedure, make sure the items listed below are connected, installed or closed:		
(1) Control-Converter		
(2) 82P-F001A		
(3) 82P-F001B		
(4) Rear Electronic Equipment Control		
(5) Door 13R	-	-

MENU DISPLAY

BIT CONTROL DISPLAY

00400101

Figure 1.   Digital Display Indicator IP-1317( ) Displays (Sheet 1)

TEST PATTERN DISPLAY

MAINTENANCE BIT CONTROL DISPLAY

00400102

Figure 1. Digital Display Indicator IP-1317( ) Displays (Sheet 2)

7 SEGMENT DISPLAY

CUES

16 SEGMENT DISPLAY
(OUTER SEGMENTS)

16 SEGMET DISPLAY
(INNER SEGMENT)

FIRST LAMP TEST DISPLAY

SECOND LAMP TEST DISPLAY

SCRATCHPAD

OPTION SWITCHES

KEYBOARD

COMM
CHANNEL

OPTION 1
OPTION 2
OPTION 3
OPTION 4
OPTION 5

SWITCH TEST DISPLAY

00400201

Figure 2. Electronic Equipment Control Test Displays (Sheet 1)

7-SEGMENT DISPLAY

ZERO ONE TWO THREE FOUR

FIVE SIX SEVEN EIGHT NINE

MINUS SIGN DECI-MAL POINT DEGREE SIGN MINUTE SIGN

16-SEGMENT DISPLAY

ZERO ONE TWO THREE FOUR FIVE

SIX SEVEN EIGHT NINE A B

C D E F G H

I J K L M N

O P Q R S T

U V W X Y Z

SLASH BLANK MINUS SIGN DEGREE SIGN DECIMAL POINT

00400202

Figure 2.   Electronic Equipment Control Test Displays (Sheet 2)

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

CONTROL-CONVERTER C-10382/A

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

None

Table 1. Control-Converter C-10382/A Test

Procedure	Normal Indication	Remedy for Abnormal Indication
System Required Components Control-Converter Digital Data Computer No. 1 Electronic Equipment Control Left Mux Bus Impedance Matching Network MC/HYD ISOL Control Panel Assembly Right Mux Bus Impedance Matching Network **Related Systems Required** Avionics Cooling System Electrical System Maintenance Status Display and Recording System Multipurpose Display Group **Support Equipment Required** None		

Table 1.   Control-Converter C-10382/A Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
Materials Required		
None		
NOTE		
If a malfunction occurs during this test, make sure circuit breakers shown on figure 1, WP007 00 are closed.		
For component locator, refer to WP006 00.		
a. Observe WPN SYS FAIL indicator on nose wheelwell digital display indicator.	WPN SYS FAIL indicator is black (not latched).	If latched, do built-in test/reset procedure (A1-F18AC-LMM-000).
b. Apply electrical power (A1-F18AC-LMM-000).		
c. On GND PWR control panel assembly, set and hold 1 and 2 switches to B ON for 3 seconds.	Switches remain on (latched).	1. If switches unlatch in 10 to 30 seconds, apply external cooling air to aircraft.

2.   If switches do not remain on, troubleshoot (A1-F18AC-420-200, WP006 00). |
| d.   On left and right Digital Display Indicators IP-1317( ), (LDDI and RDDI), set power switch to DAY or NIGHT and allow 2 minute warmup. Adjust BRT and CONT controls for best display. | LDDI and RDDI have display and center pushbutton switch on bottom row that is labeled MENU. | 1.   No display on LDDI, F/A-18A, do table 1 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 1 (A1-F18AC-745-200, WP007 00).

2.   No display on RDDI, F/A-18A, do table 2 (A1-F18AC-745-200, WP006 00), F/A-18B, do table 2 (A1-F18AC-745-200, WP007 00).

3.   If STANDBY is displayed, F/A-18A, do table 2 (A1-F18AC-745-200, WP004 00). F/A-18B, do table 2 (A1-F18AC-745-200, WP005 00).

4.   If BRT or CONT controls do not affect display, replace left or right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00). |
| e.   On RDDI, press and release MENU pushbutton switch. | RDDI has menu display (fig 1). | Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00). |

Table 1.   Control-Converter C-10382/A Test (Continued)

Procedure	Normal Indication	Remedy for Abnormal Indication
f. Press and release BIT pushbutton switch.	RDDI has BIT control display (fig 1).	Replace Right Digital Display Indicator IP-1317( ) (A1-F18AC-745-300, WP004 00).
g. Press and release CSC pushbutton switch.	CSC BIT status message is IN TEST and then GO (fig 1).	1. If NOT RDY displayed, do table 2. 2. If RESTRT displayed, do step g again. If RESTRT displayed a second time, replace Control Converter (A1-F18AC-741-300, WP005 00). 3. If DEGD, DEGD OH, OH or NO GO displayed, replace Control-Converter (A1-F18AC-741-300, WP005 00).
h. On LDDI and RDDI, set power switch to OFF.		
i. Remove electrical power (A1-F18AC-LMM-000).		
j. Read out and record failure codes on nose wheelwell digital display indicator (A1-F18AC-LMM-000).	Code 004 is not displayed.	1. Replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00). 2. Repeat steps a through g. 3. If MMP code 004 still remains, do table 4, WP008 00.

Table 2.   NOT RDY Displayed on CSC BIT Status Message

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

**Part Number or
Type Designation**   **Nomenclature**

77/BN   Multimeter

Materials Required

None

Table 2.   NOT RDY Displayed on CSC BIT Status Message (Continued)

NOTE

AC/DC Power Schematic (A1-F18AC-741-500, WP009 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Control-Converter
No. 2 Circuit Breaker Panel Assembly
No. 2 Relay Panel Assembly
No. 4 Circuit Panel Assembly

Procedure	No	Yes

CAUTION

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale. Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

NOTE

The question used in logic tree "Does continuity exist" means to test for the items listed below:

1. Pin to pin test per procedural step.
2. Shorts to ground.
3. Shorts between surrounding pins on connectors.
4. Shorts between shield and conductors.
5. Shield continuity.

a.   Do substeps below:

  (1)   Open door 10R (A1-F18AC-LMM-010).

  (2)   Make sure the circuit breakers listed below are closed:

    On 161353 THRU 161359, no. 4 circuit breaker panel assembly 82CBD002, 82CBD003 and 82CBD004.

    On 161360 AND UP, no. 2 circuit breaker panel assembly 82CBD002, 82CBD003 and 82CBD004.

    On no. 4 circuit breaker panel assembly 82CBD005.

  (3)   Close tripped circuit breakers.

  (4)   Turn on electrical power (A1-F18AC-LMM-000).

Table 2.   NOT RDY Displayed on CSC BIT Status Message (Continued)

Procedure	No	Yes
(5) Do circuit breakers trip?	b	l
b. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 13R (A1-F18AC-LMM-010).		
(3) Disconnect 82P-F001C from control-converter (door 13R).		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) On GND PWR control panel assembly, set and hold 1 switch to A ON and 2 switch to B ON for 3 seconds.		

(6)   Does 115vac exist from:
 	
    82P-F001C pin 43 to 82P-F001C pin 54
    82P-F001C pin 55 to 82P-F001C pin 54
    82P-F001C pin 67 to 82P-F001C pin 54? . . . .
	e	c

c. Does 28vdc exist from 82P-F001C pin 78 to 82P-F001C pin 77 (ground)?	f	d
d. Replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00) and do step r.	-	-
e. Do the substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 14R (A1-F18AC-LMM-010).		
(3) Disconnect 52P-F058B from no. 2 relay panel assembly.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		

(5)   Does 115vac exist from:
 	
    52P-F058B pin 40 to 52P-F058B pin 46
    52P-F058B pin 41 to 52P-F058B pin 46
    52P-F058B pin 42 to 52P-F058B pin 46? . . . .
	j	g

f. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 14R (A1-F18AC-LMM-010).		
(3) Disconnect 52P-F058B from no. 2 relay panel assembly.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) Does 28vdc exist from 52P-F058B pin 43 to 52P-F058B pin 46 (ground)?	n	g

Table 2.   NOT RDY Displayed on CSC BIT Status Message (Continued)

Procedure	No	Yes
g. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Does continuity exist from:		

52P-F058B pin 89 to 82P-F001C pin 43
    52P-F058B pin 78 to 82P-F001C pin 55
    52P-F058B pin 67 to 82P-F001C pin 67
    52P-F058B pin 55 to 82P-F001C pin 78? . . . .
	h	i

h. Isolate defective aircraft wiring (A1-F18A( )-WDM-000) and do step r.	-	-
i. Isolate between 1K-F056 and no. 2 relay panel assembly wiring (A1-F18AC-420-300, WP033 00) and do step r.	-	-
j. Do substeps below:		
(1) On 161353 THRU 161359, disconnect 52P-D026D from no. 4 circuit breaker panel assembly. On 161360 AND UP, disconnect 52P-D024D from no. 2 circuit breaker panel assembly.		
(2) Does continuity exist from: On 161353 THRU 161359		

52P-D026D pin 37 to 52P-F058B pin 40
  52P-D026D pin 36 to 52P-F058B pin 41
  52P-D026D pin 35 to 52P-F058B pin 42? . . . .
	h	k

On 161360 AND UP		

52P-D024D pin 29 to 52P-F058B pin 40
  52P-D024D pin 62 to 52P-F058B pin 41
  52P-D024D pin 42 to 52P-F058B pin 42? . . . .
	h	k

k. On 161353 THRU 161359, isolate between 82CBD002, 82CBD003, 82CBD004 and no. 4 circuit breaker panel assembly wiring (A1-F18AC-420-300, WP029 00) and do step r.	-	-
On 161360 AND UP, isolate between 82CBD002, 82CBD003, 82CBD004 and no. 2 circuit breaker panel wiring (A1-F18AC-420-300, WP024 00) and do step r.	-	-
l. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 13R (A1-F18AC-LMM-000).		
(3) Disconnect 82P-F001C from control-converter.		

Table 2.   NOT RDY Displayed on CSC BIT Status Message (Continued)

Procedure	No	Yes
(4) Close all circuit breakers.		
(5) Turn on electrical power (A1-F18AC-LMM-000).		
(6) On GND PWR control panel assembly, set and hold 2 switch to B ON for 3 seconds.		
(7) Do circuit breakers trip?	d	m
m. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058B from no. 2 relay panel assembly.		
(3) Close all circuit breakers.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) Do circuit breakers trip?	g	p
n. Do substeps below:		
(1) On 161353 THRU 161359, disconnect 52P-D026D from no. 4 circuit breaker panel assembly. On 161360 AND UP, disconnect 52P-D026A from no. 4 circuit breaker panel assembly.		
(2) On 161353 THRU 161359, does continuity exist from 52P-D026D pin 30 to 52P-F058B pin 43?	h	o
On 161360 AND UP, does continuity exist from 52P-D026A pin 30 to 52P-F058B pin 43?	h	o
o. Isolate between 82CBD005 and no. 4 circuit breaker panel assembly wiring (A1-F18AC-420-300, WP029 00) and do step r.	-	-
p. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-D026D from no. 4 circuit breaker panel assembly.		
(3) Close control-converter circuit breakers 82CBD002, 82CBD003, 82CBD004 and 82CBD005.		
(4) Turn on electrical power (A1-F18AC-LMM-000).		
(5) Do circuit breakers trip?	h	q

Table 2.   NOT RDY Displayed on CSC BIT Status Message (Continued)

Procedure	No	Yes
q. Isolate between 82CBD002, 82CBD003, 82CBD004, 82CBD005 and no. 4 circuit breaker panel assembly wiring (A1-F18AC-420-300, WP029 00) and do step r.	-	-
r. If disconnected, removed or opened during this procedure, make sure the items listed below are connected, installed or closed:		
(1) 82P-F001C		
(2) Door 10R		
(3) 52P-F058B		
(4) 52P-D024D		
(5) 52P-D026A		
(6) 52P-D026D		
(7) Door 13R		
(8) Door 14R	-	-

MENU DISPLAY

BIT CONTROL DISPLAY

005001
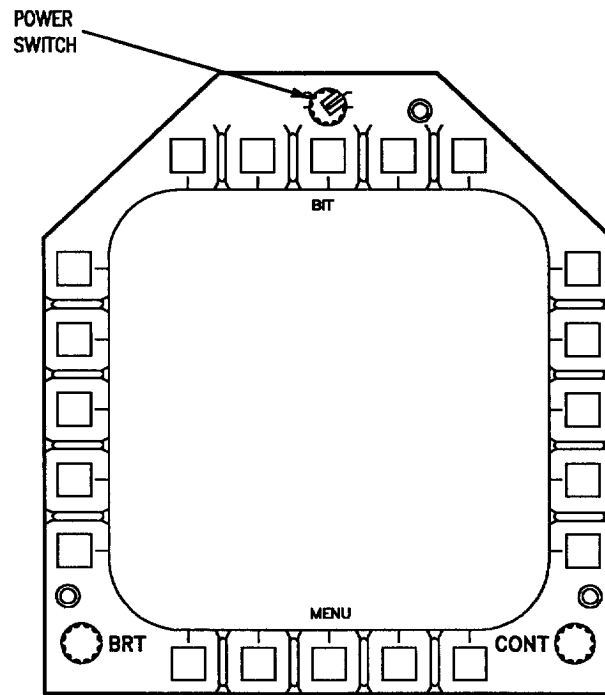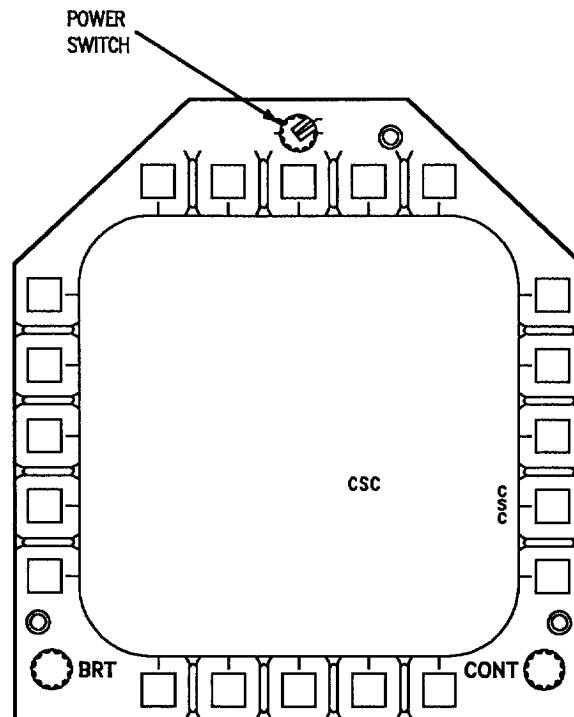
Figure 1.   Test Displays

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

COMPONENT LOCATOR

MISSION COMPUTER SYSTEM

Reference Material

None

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 48	-	Automatic AC Bus Isolation (ECP MDA-F/A-18-00121)	1 Jun 92	-
F/A-18 AFC 253	-	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	-
F/A-18 AFC 292	-	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	-
F/A-18 AFC 225	-	Five (5) Avionics Multiplex Bus Upgrade, Incorporation of (ECP MDA-F/A-18 0529)	15 Jan 03	-
F/A-18 AFC 231	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-
F/A-18 AFC 231 Part 2 or Part 3	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-

Figure 1.   Mission Computer System Component Locator (Sheet 1)

00600101

13

14

GUIDE
PINS

J2

A

16
79P–J001B
(MATES WITH J1B)

FWD

15
79P–J001A
(MATES WITH J1A)

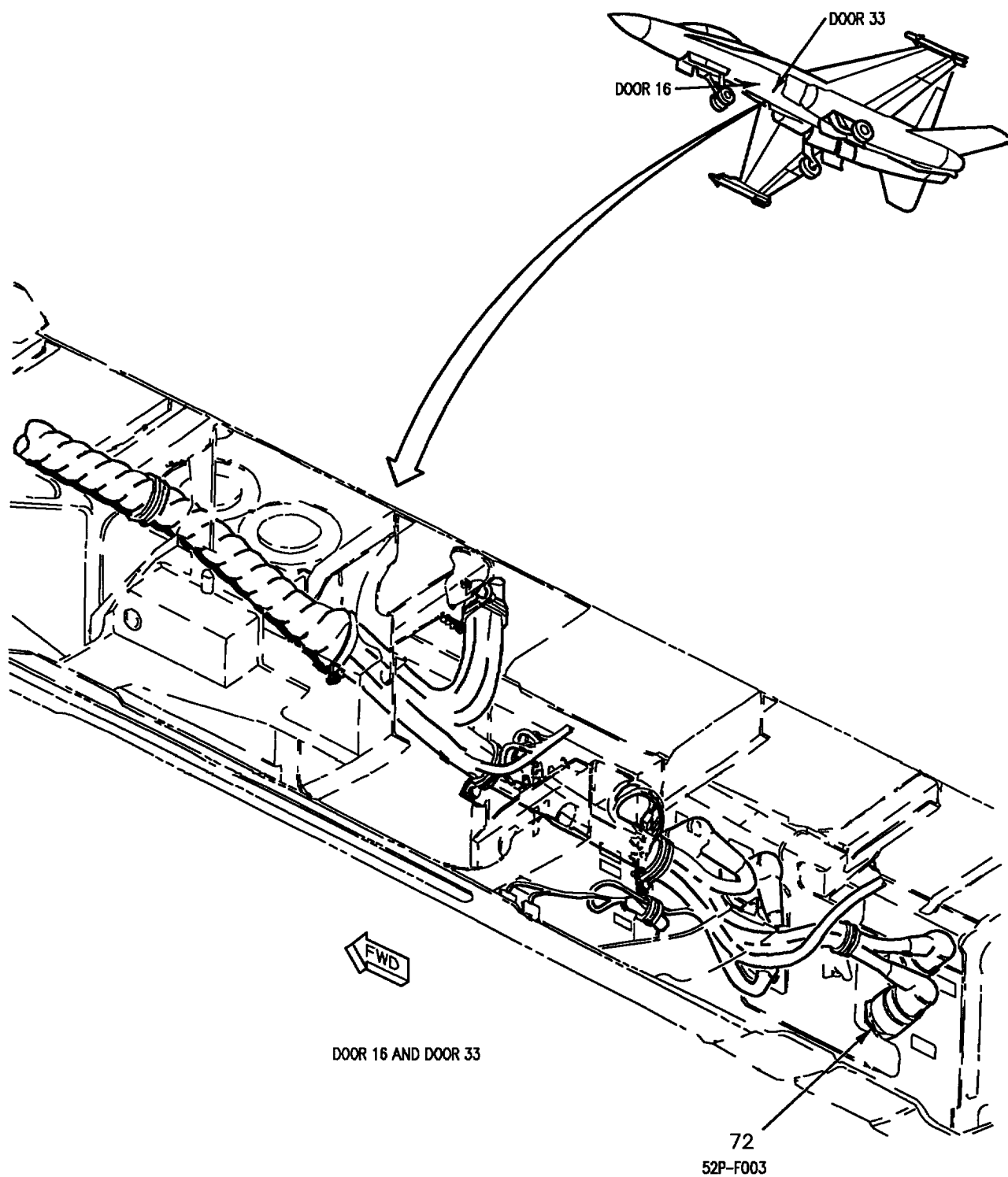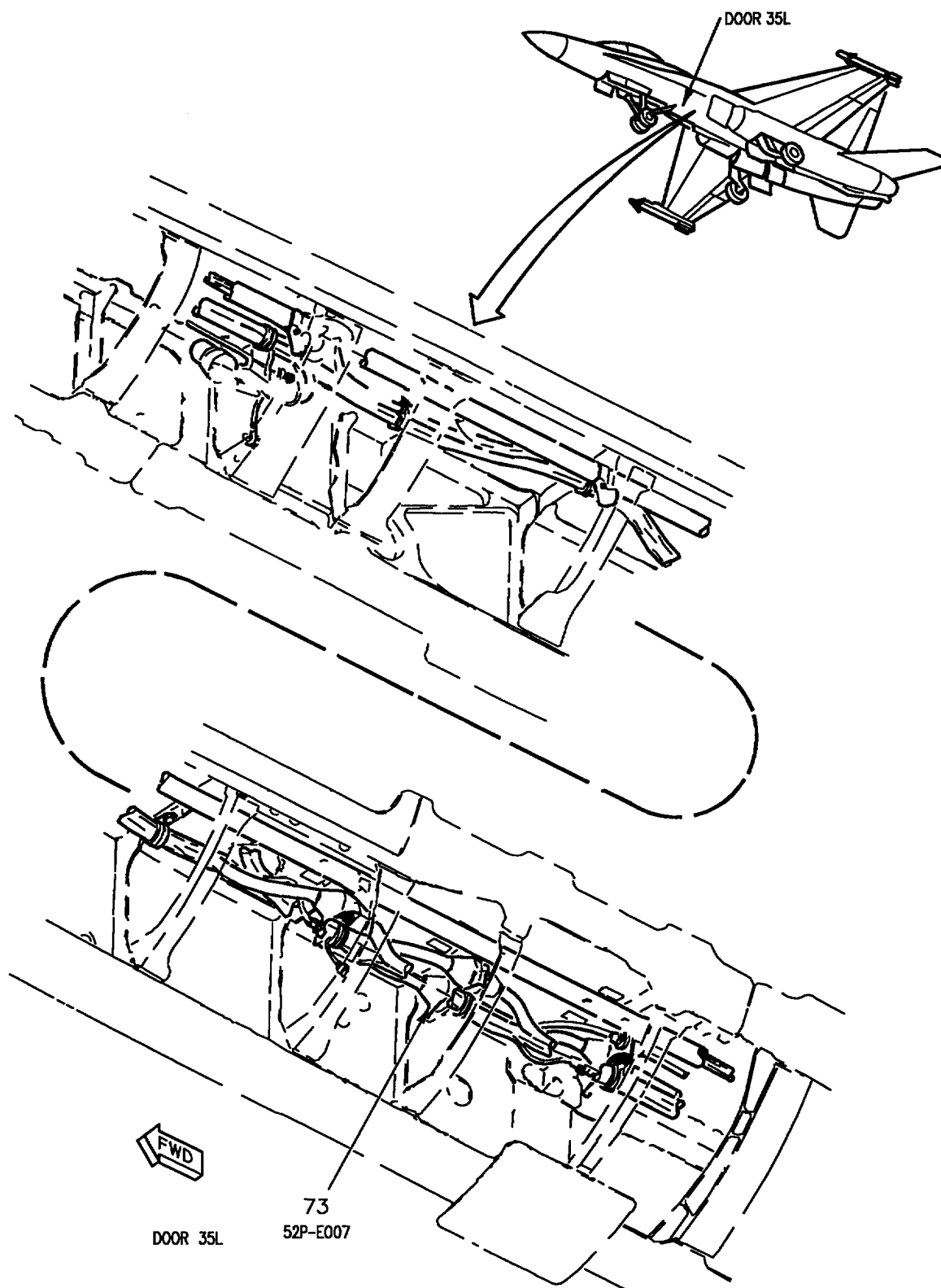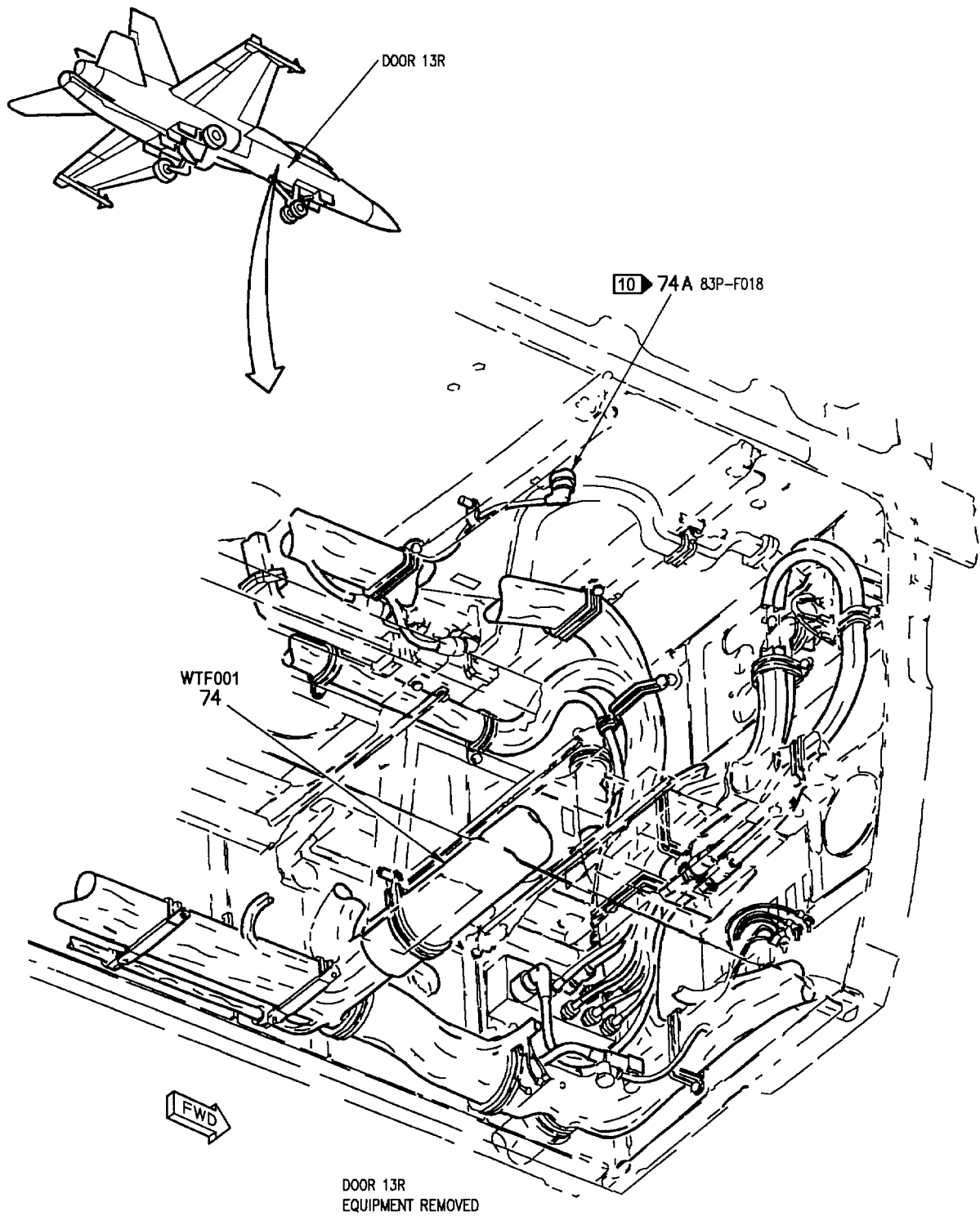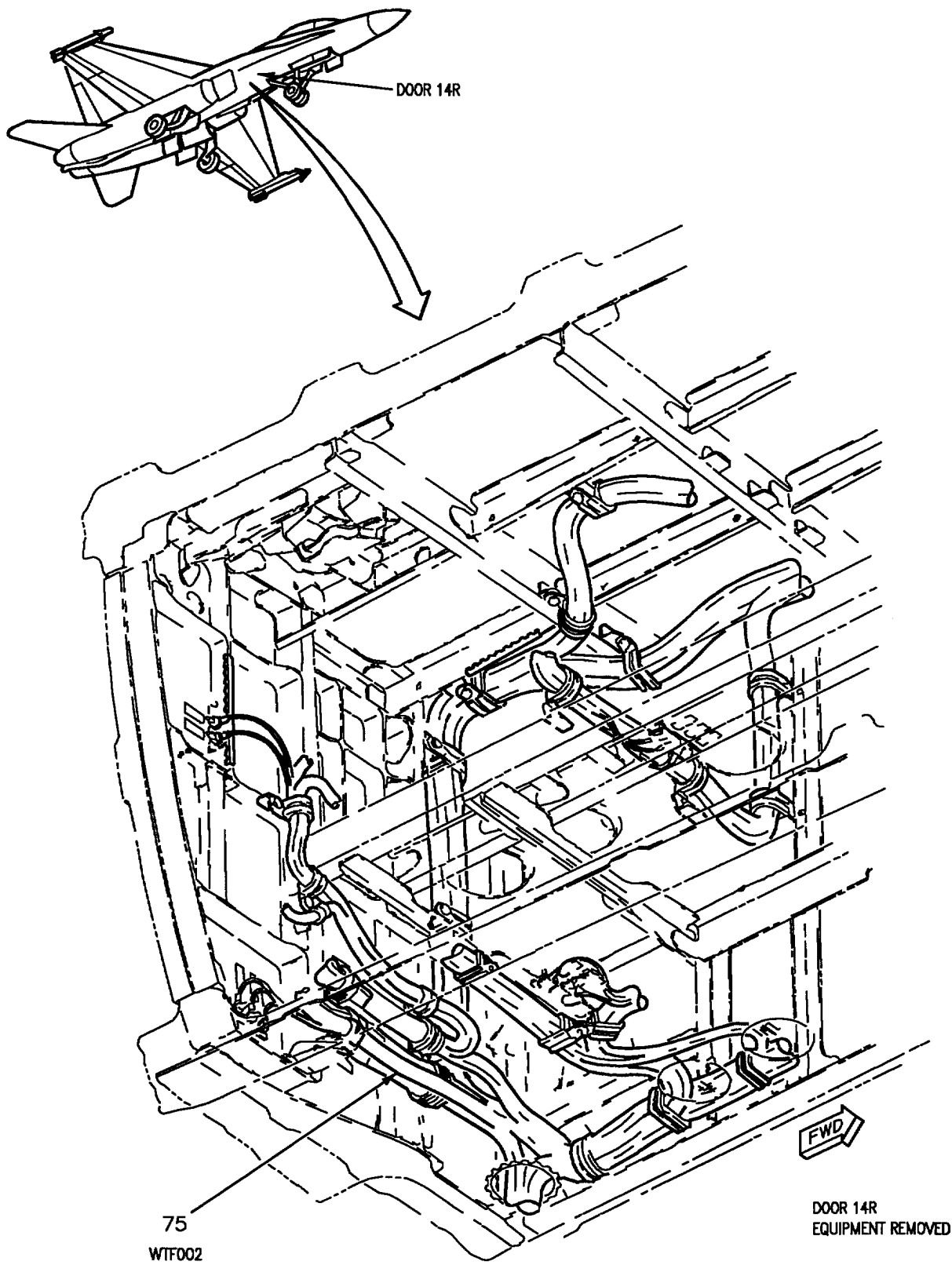(SHOWN WITH WINDSHIELD
OPEN AND HEAD–UP
DISPLAY UNIT REMOVED)

B
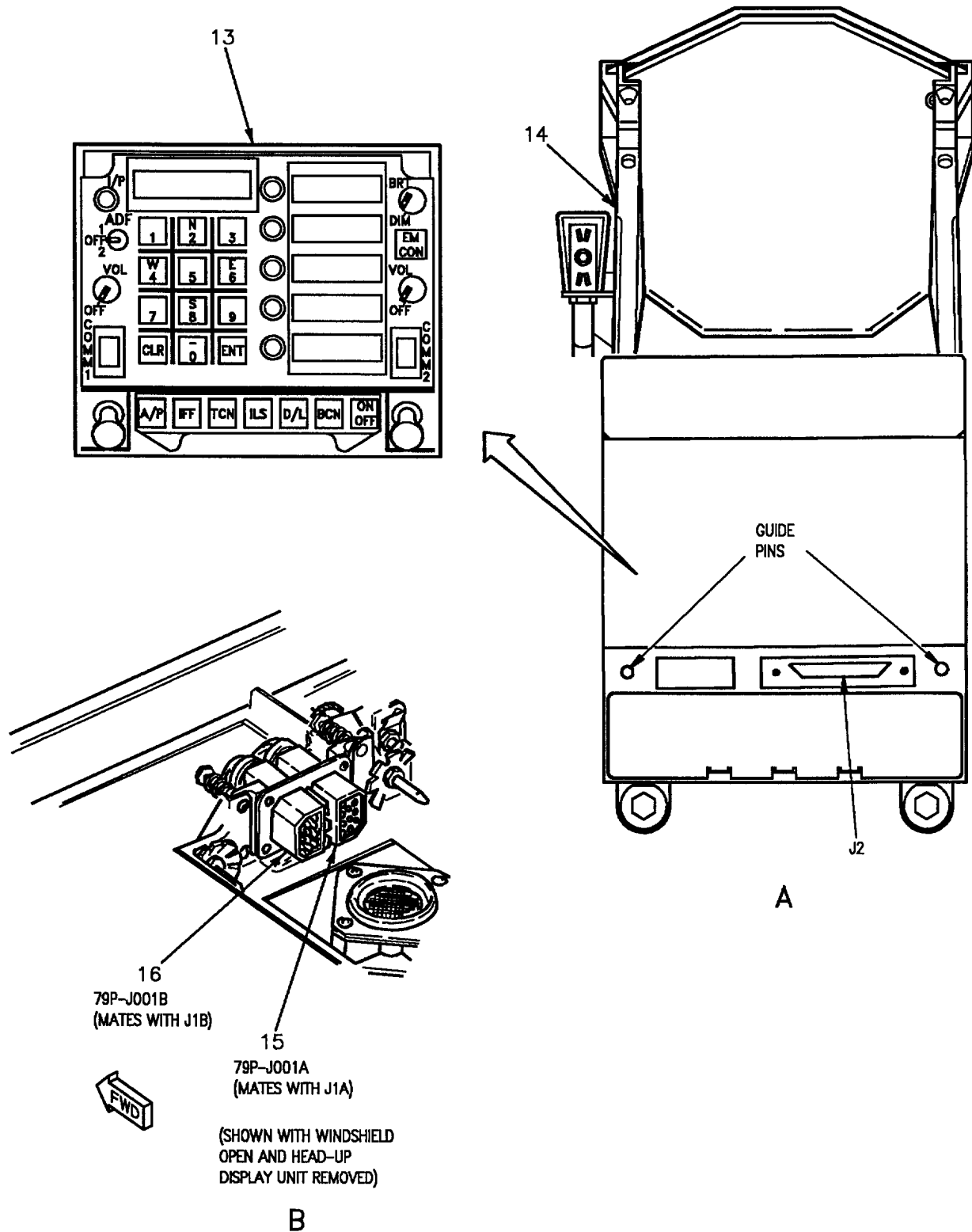
00600102

Figure 1.   Mission Computer System Component Locator (Sheet 2)
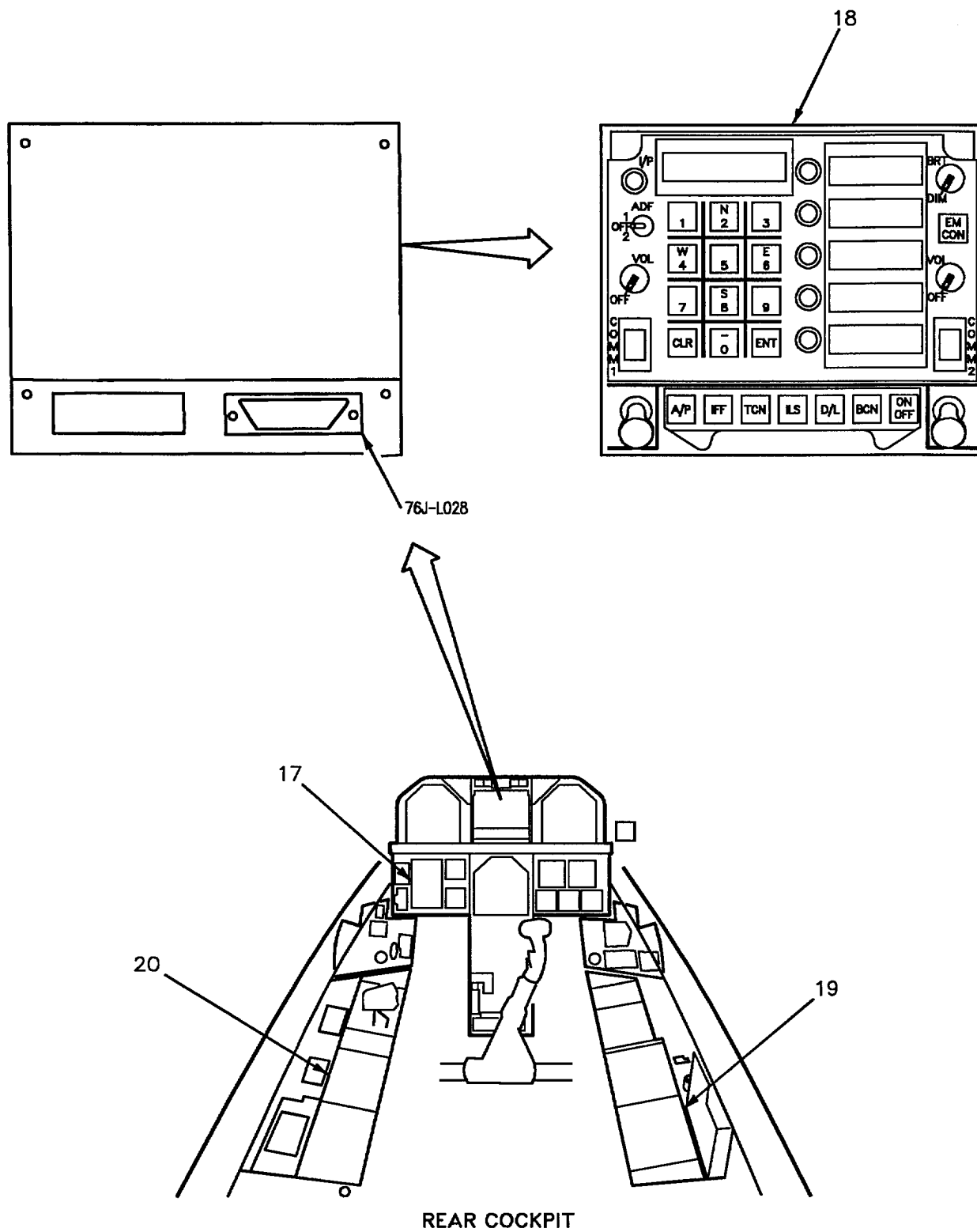
Figure 1. Mission Computer System Component Locator (Sheet 3)

00600103

REAR COCKPIT
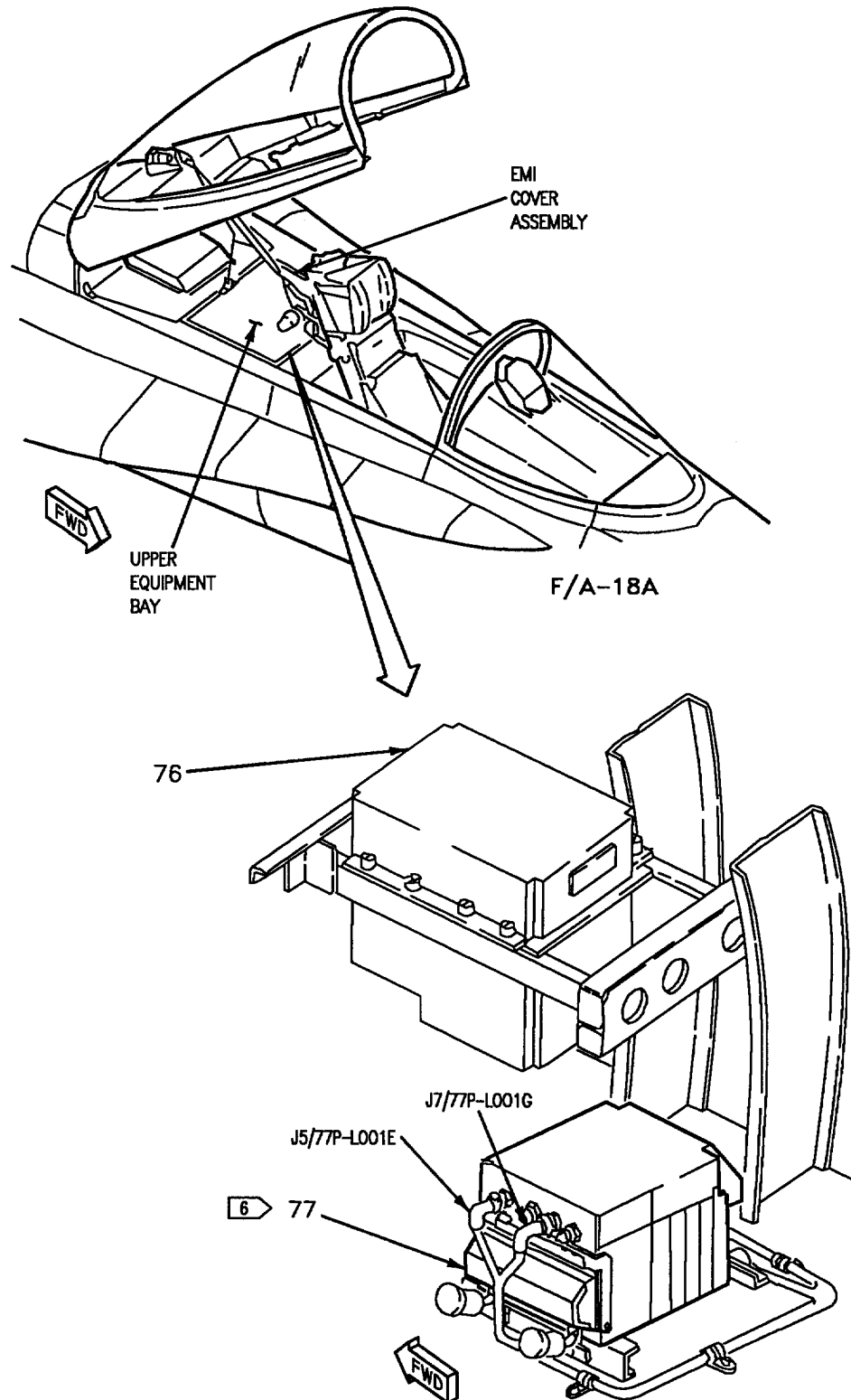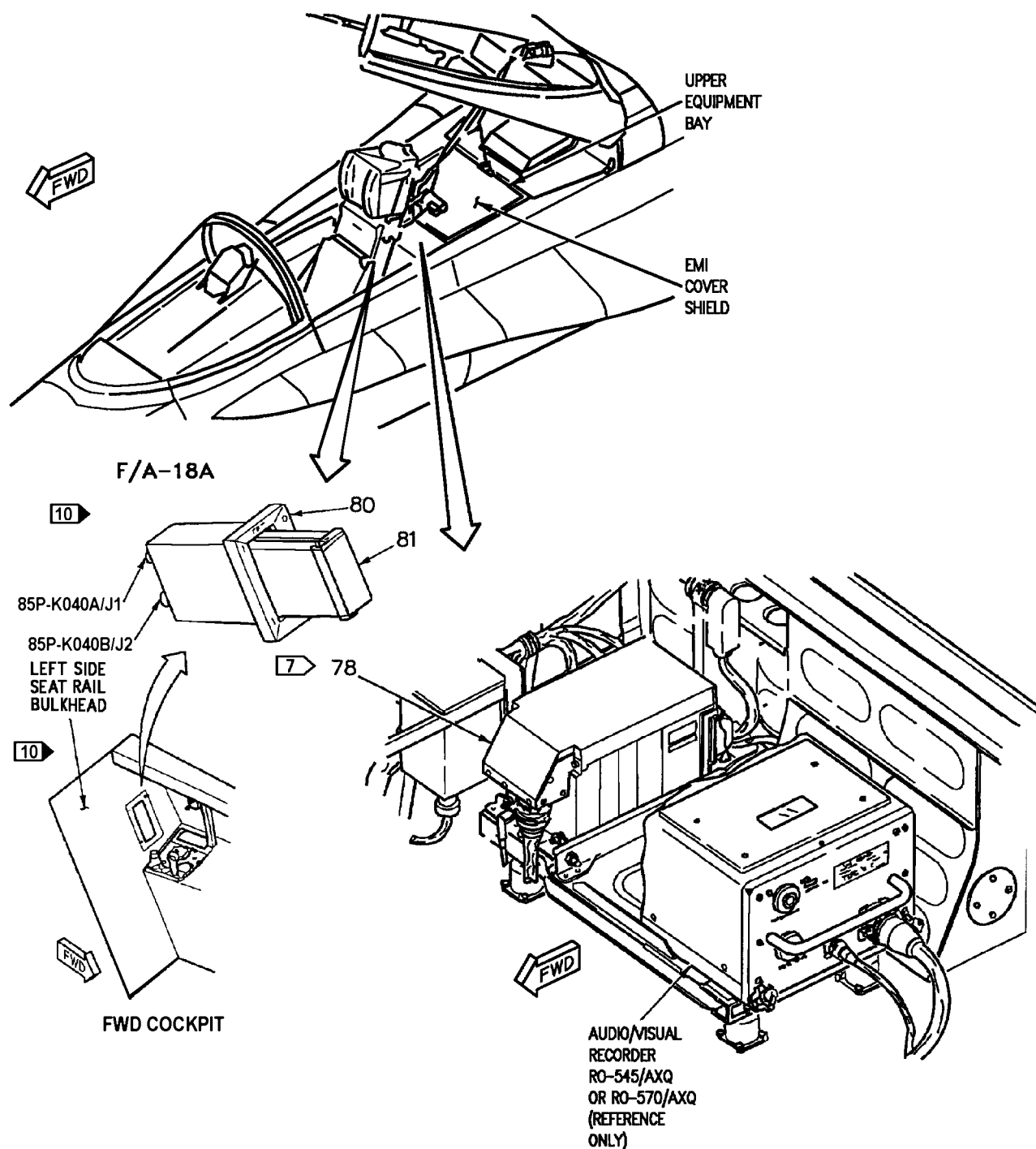
2▷ 21

00600104
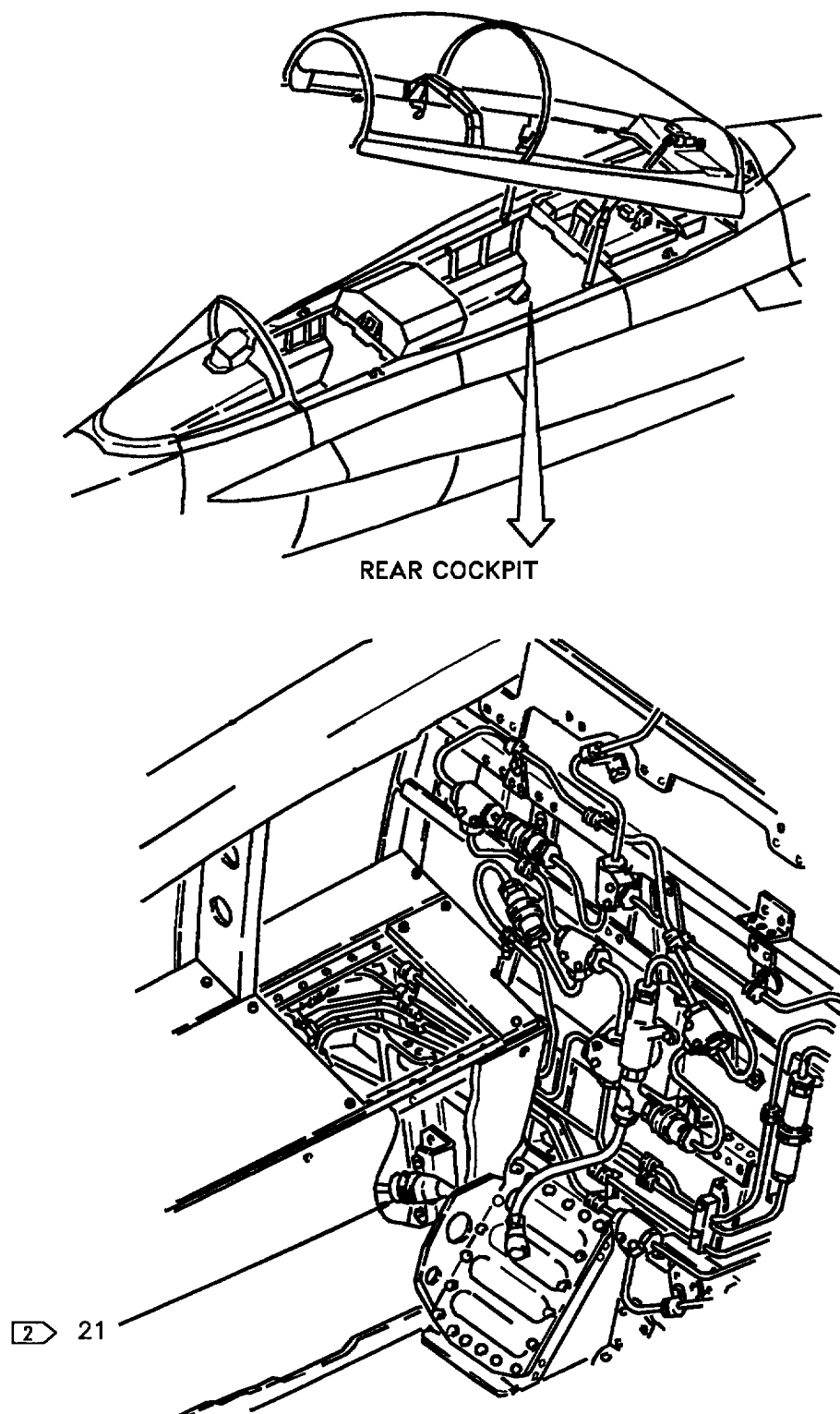
Figure 1.   Mission Computer System Component Locator (Sheet 4)

00600105
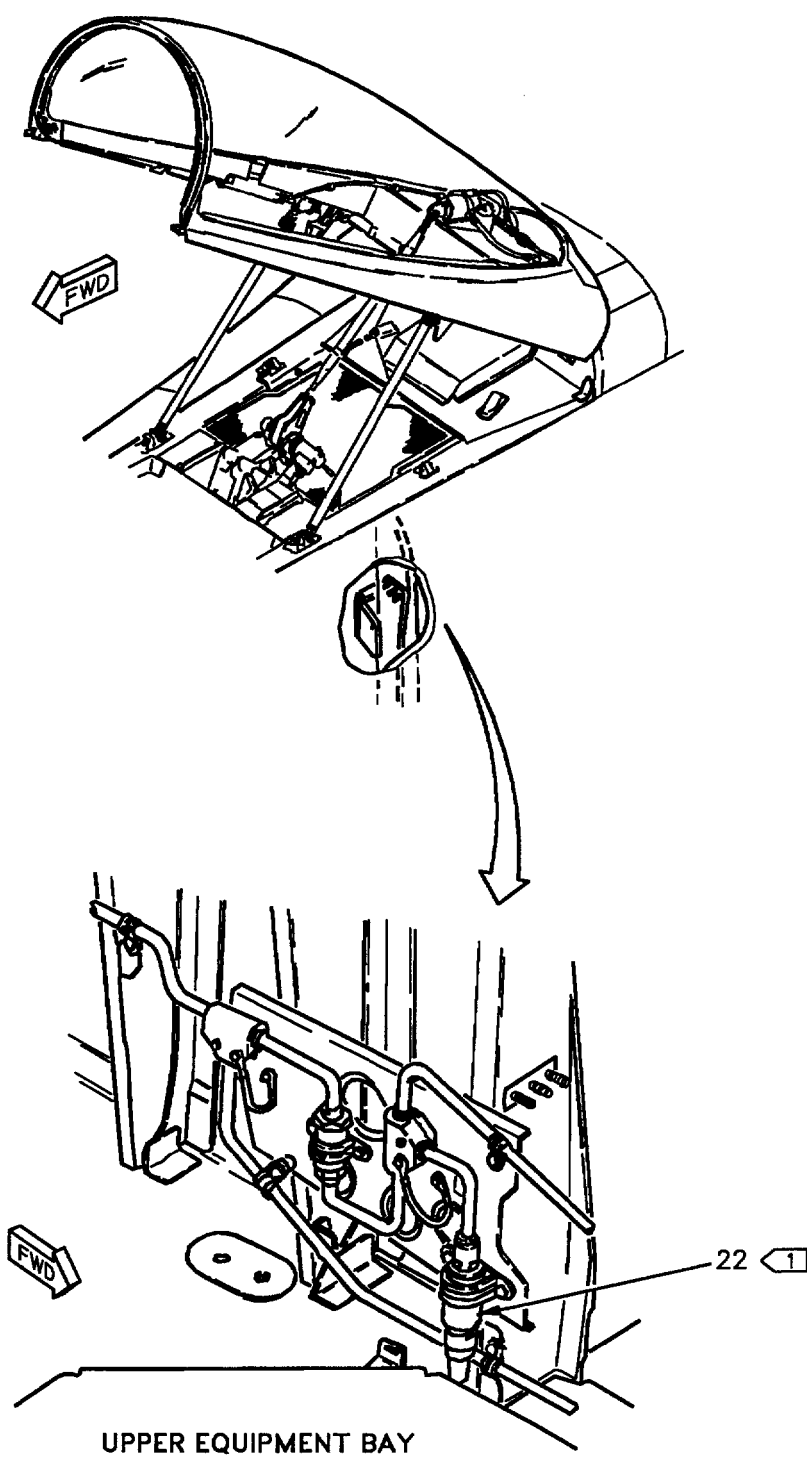
Figure 1.   Mission Computer System Component Locator (Sheet 5)
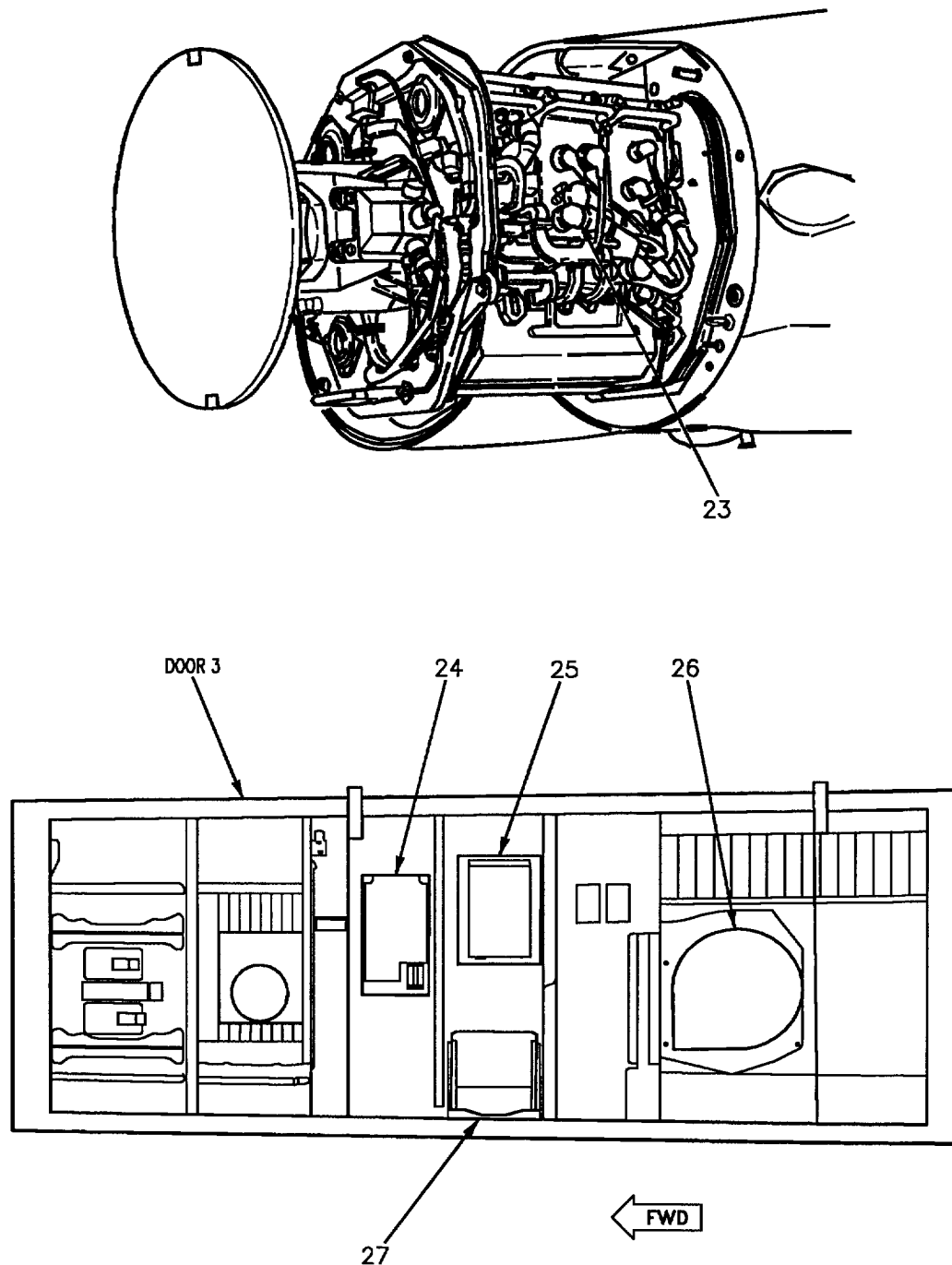
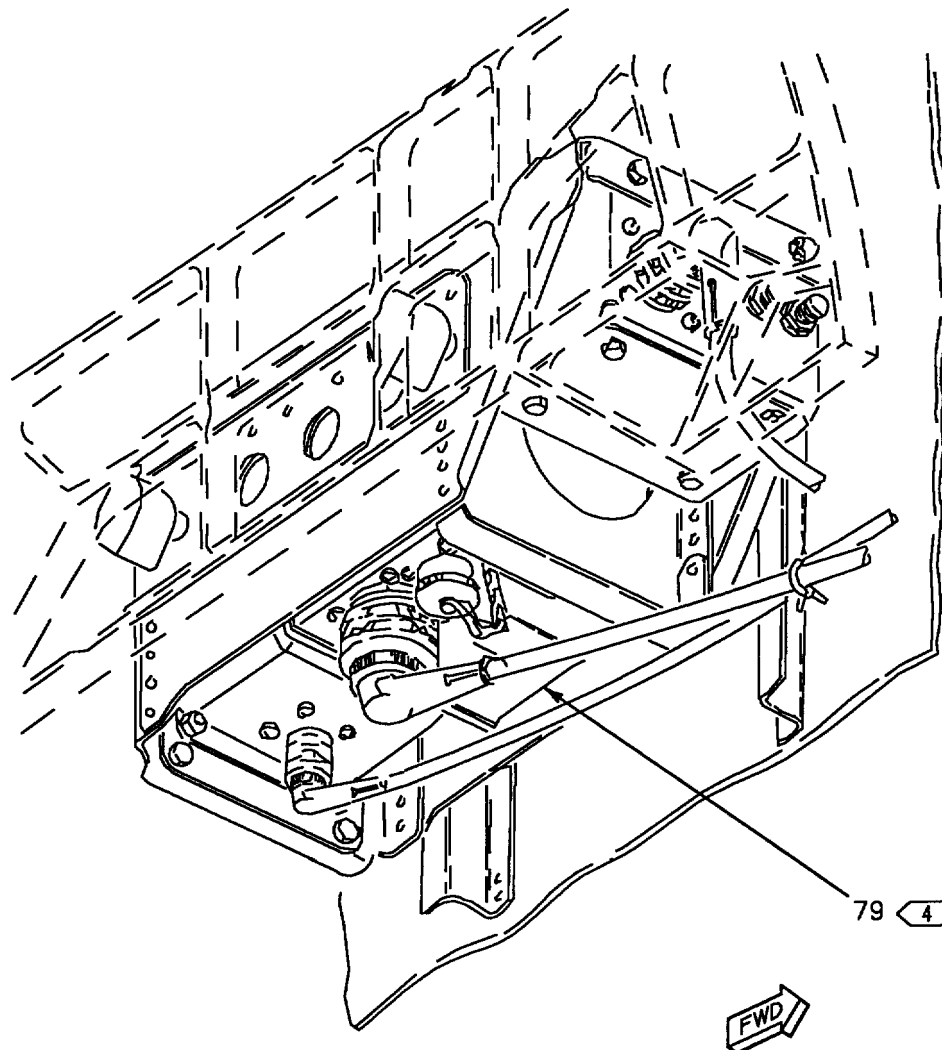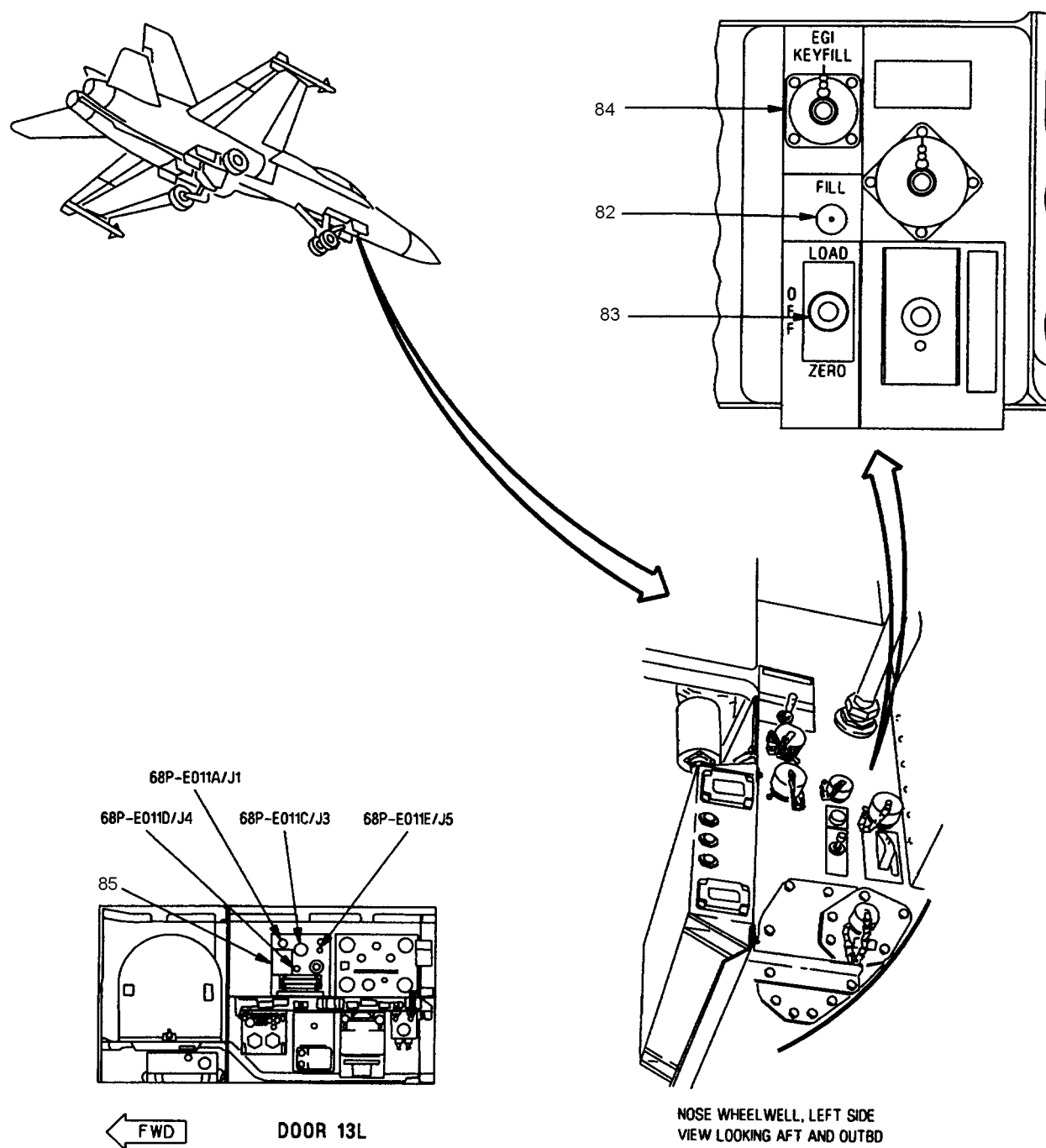Figure 1.   Mission Computer System Component Locator (Sheet 6)
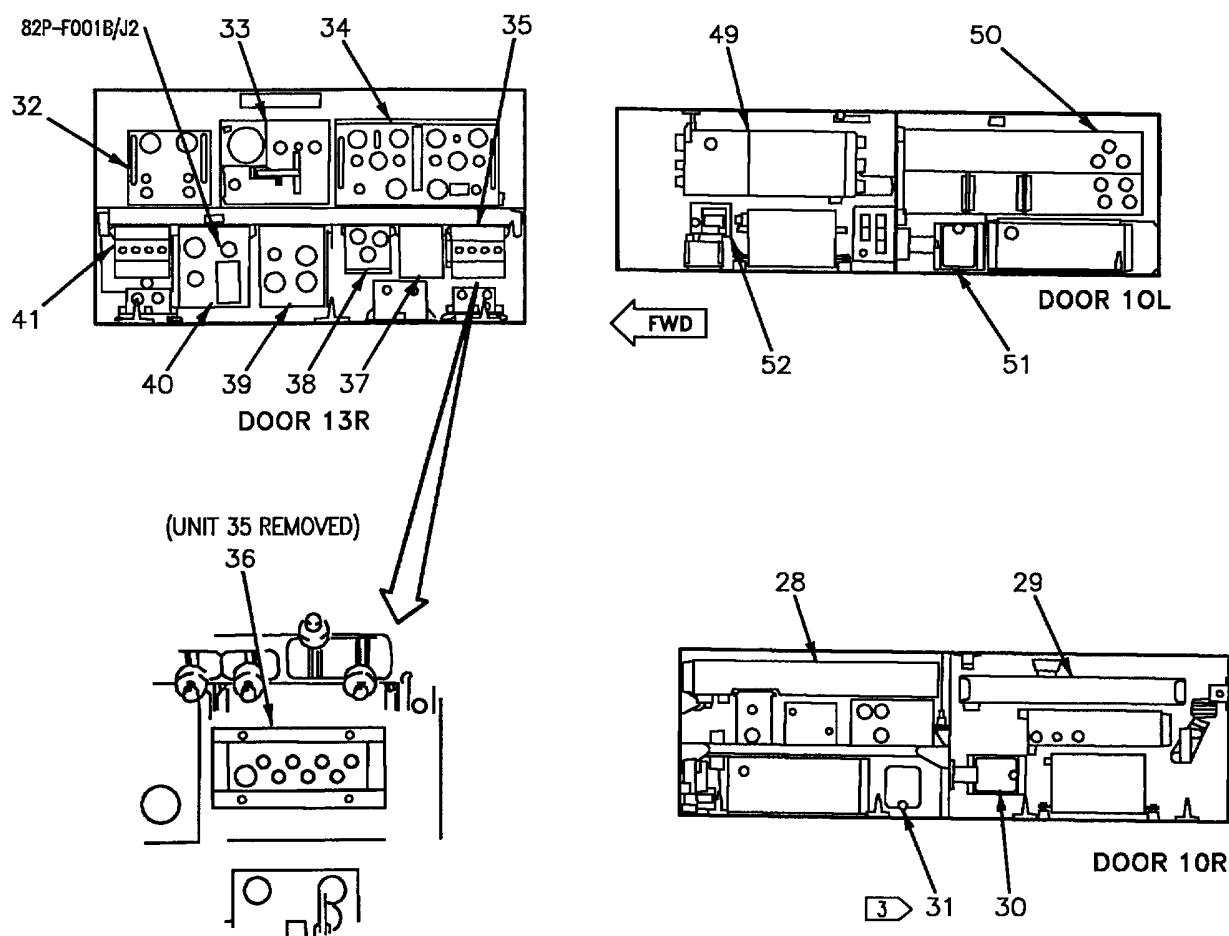
Figure 1.   Mission Computer System Component Locator (Sheet 7)

Figure 1.   Mission Computer System Component Locator (Sheet 8)
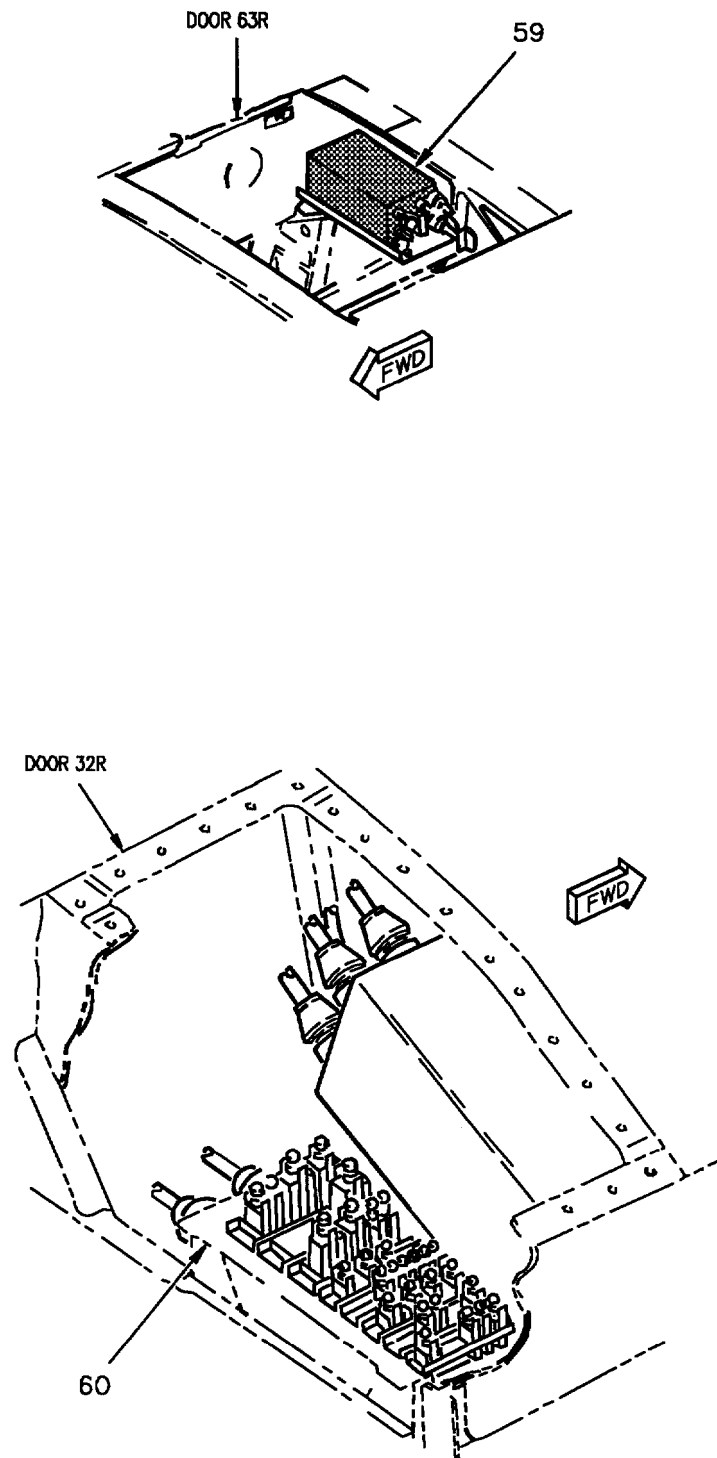
00600108

83P–E001A/J1   83P–E001D/J4   83P–E001B/J2   83P–E001C/J3

83P–E001E/J5

83P–E001D/J4   83P–E001E/J5

83P–E001A/J1   83P–E001B/J2   83P–E001C/J3

J1   J2   J3   J4   J5

PROG LOAD

J6   J7   BIT   J8

ETI

54

ETI   J1   J2   J3   J4   J5   J6   BIT   J7   J10   J8   J9   J11

13 CP–1539/AYK–14(V)   FWD

10 CP–2360/AYK–14(V)

83P–E001K/J10   83P–E001H/J8   83P–E001L/J11

53   54

55
83P–E005/
83J–Y013

87 10

FWD

58   5 57   56

DOOR 13L

83P–E001D/J4   83P–E001E/J5

83P–E001A/J1   83P–E001B/J2   83P–E001C/J3

ETI   J1   J2   J3   J4   J5   J6   BIT   J7   J10   J8   J9   J11

54

14   CP–1699/AYK–14

83P–E001K/J10   83P–E001H/J8   83P–E001L/J11

00600108

Figure 1.   Mission Computer System Component Locator (Sheet 9)

DOOR 63R

59

FWD

DOOR 32R

FWD

60

00600109

Figure 1.   Mission Computer System Component Locator (Sheet 10)

DOOR 55L

61

FWD

DOOR 55R

62
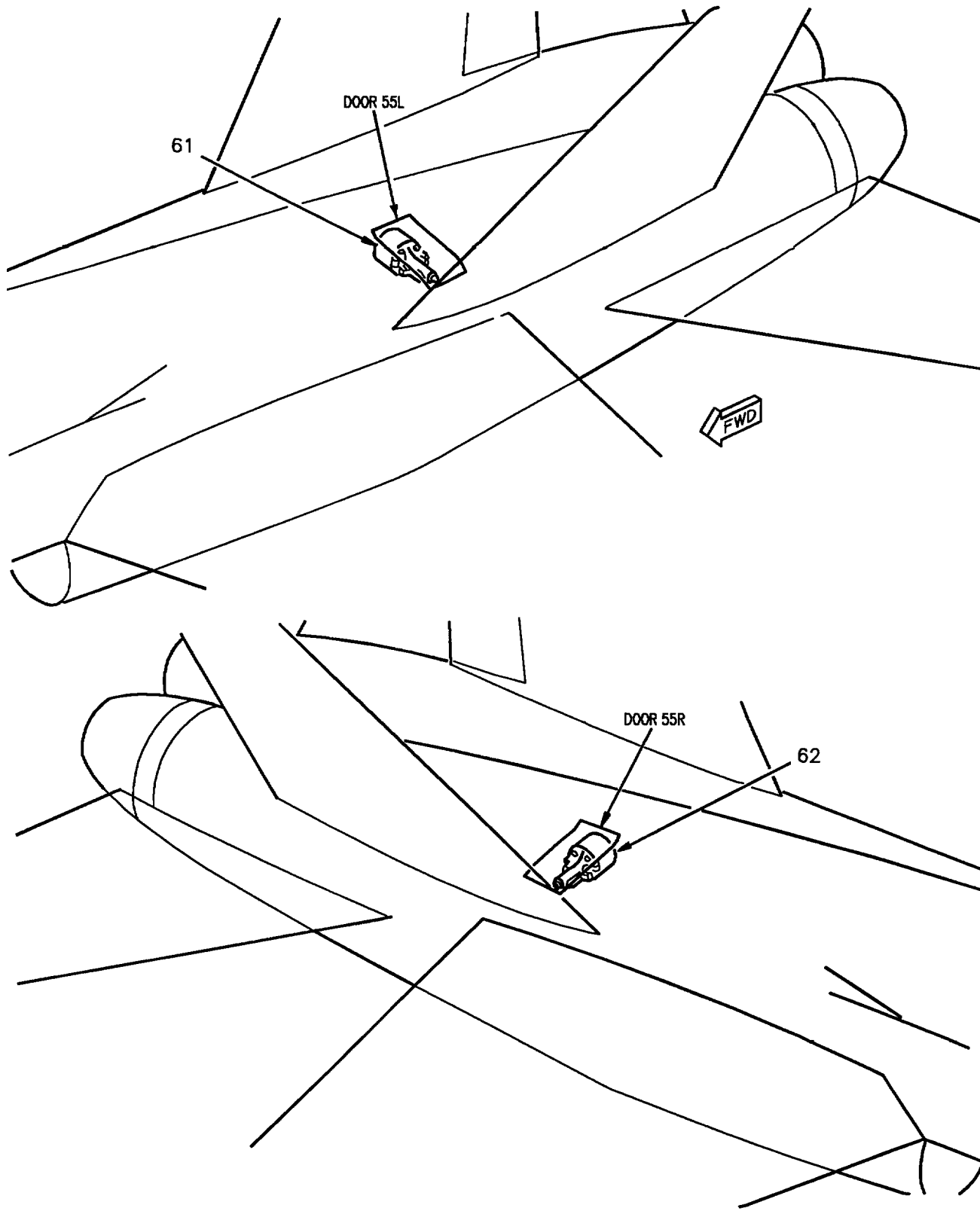
00600110

Figure 1.   Mission Computer System Component Locator (Sheet 11)
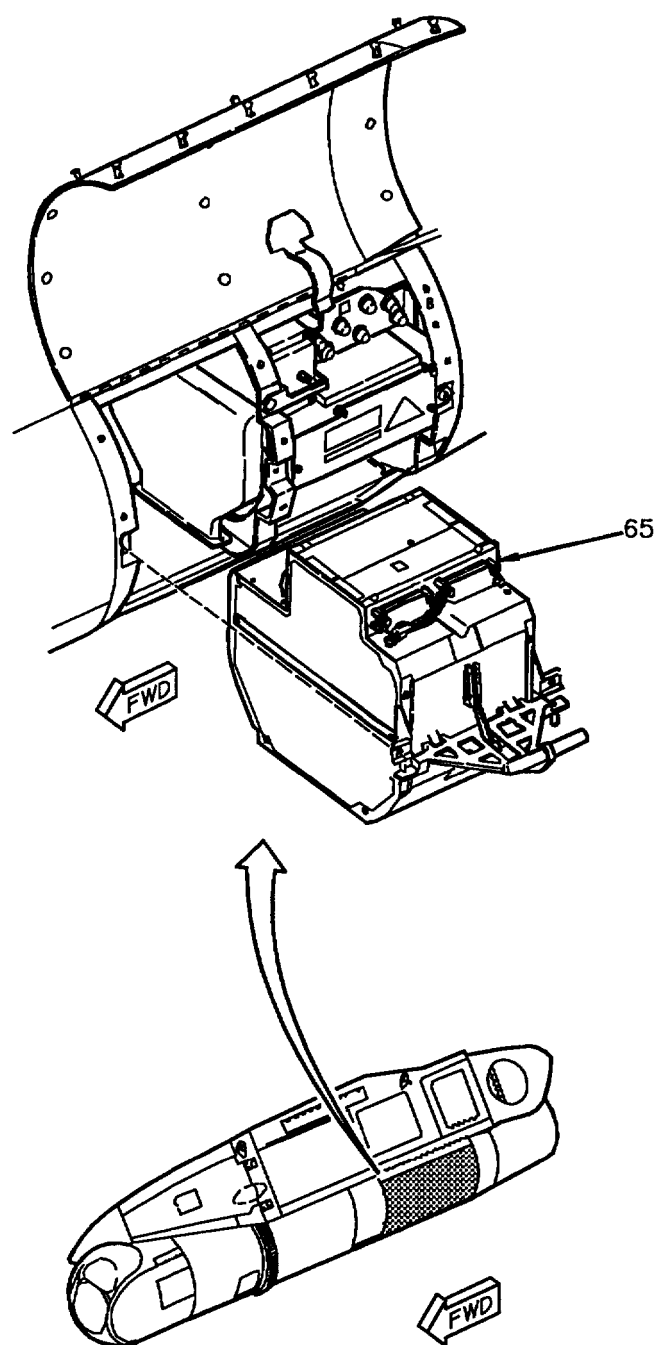
63

(NOSE WHEEL WELL
LEFT SIDE VIEW LOOKING
OUTBOARD AND AFT)

64

MAINTENANCE
CODE

DDI
FAIL

FLUIDS
LOW

WPN
STS
FAIL

TOTAL HRS

DDI
BIT/RESET

FLUIDS
CHECK

MAINTENANCE
CODE
DISPLAY

00600111

Figure 1.   Mission Computer System Component Locator (Sheet 12)

00600112

Figure 1.   Mission Computer System Component Locator (Sheet 13)

DOOR 120R

66

MOUNTING ADAPTER
MT-6082/ASQ-173
(A1-F18AC-743-300
WP003 00)

DOOR 3

DOOR 4

67

5W1P2

FWD

00600113

Figure 1.   Mission Computer System Component Locator (Sheet 14)

DOOR 10R

NO.4 CIRCUIT BREAKER
PANEL ASSEMBLY (REF)

68

9 ⟩ 52P-D026A
8 ⟩ 52P-D026D

FWD

DOOR 10R (AFT)
EQUIPMENT INSTALLED
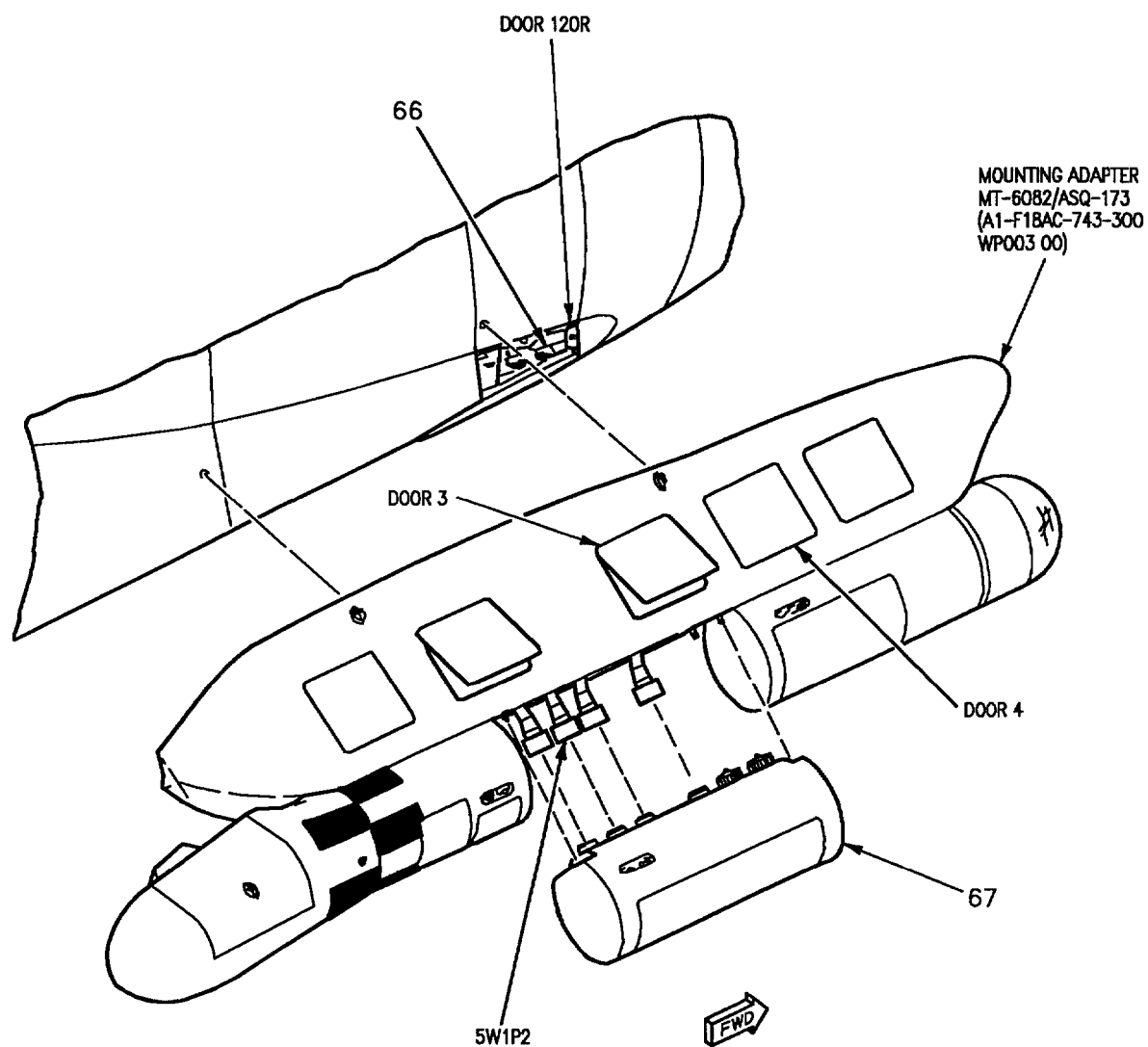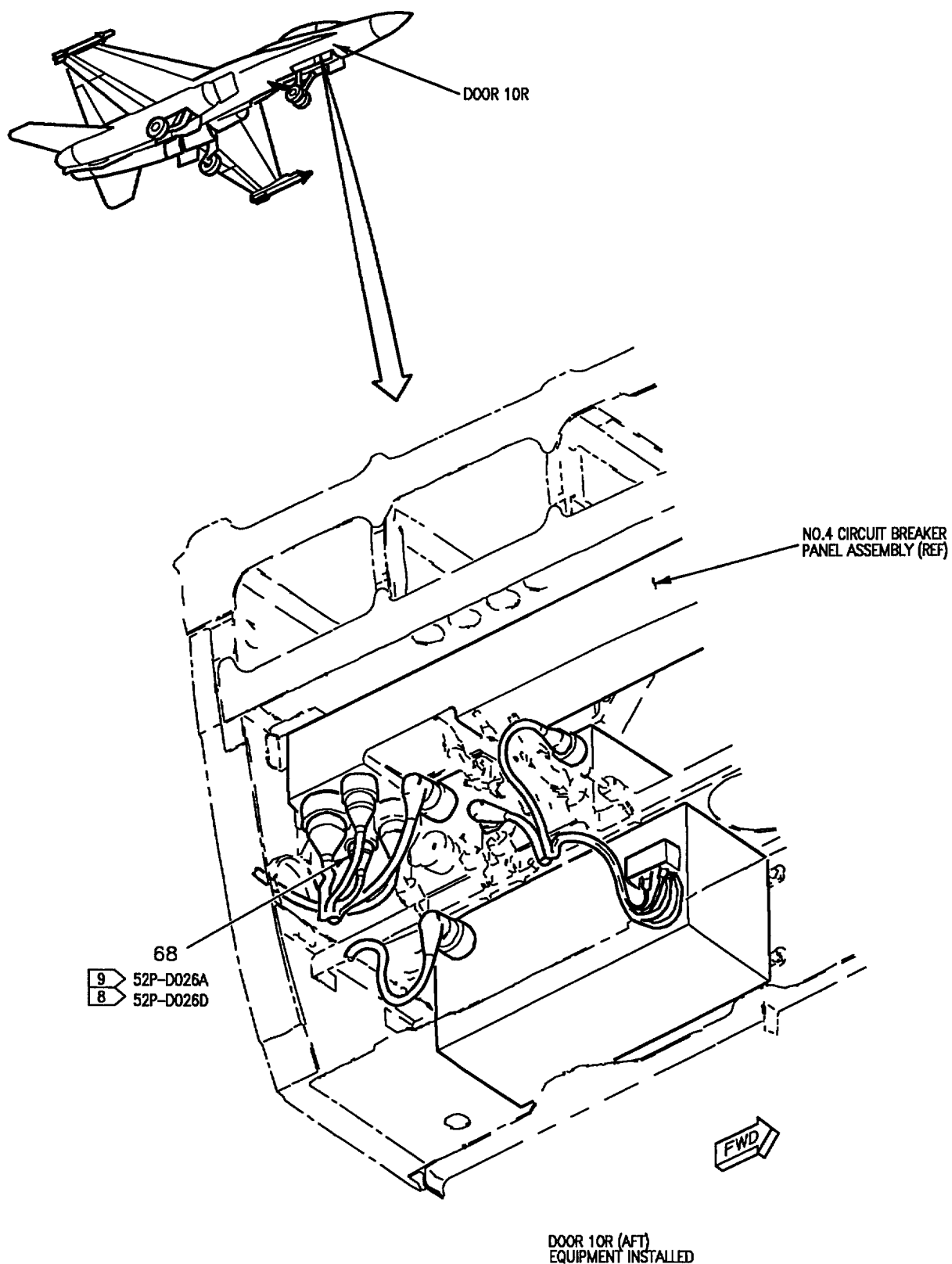
00600114

Figure 1.   Mission Computer System Component Locator (Sheet 15)

52J-H034
69

COCKPIT AREA

FWD

LEFT FWD

00600115

Figure 1.   Mission Computer System Component Locator (Sheet 16)

DOOR 3

70
52P-A034
ACCESS
FROM
DOOR 6

FWD

DOOR 3
LEFT SIDE AFT
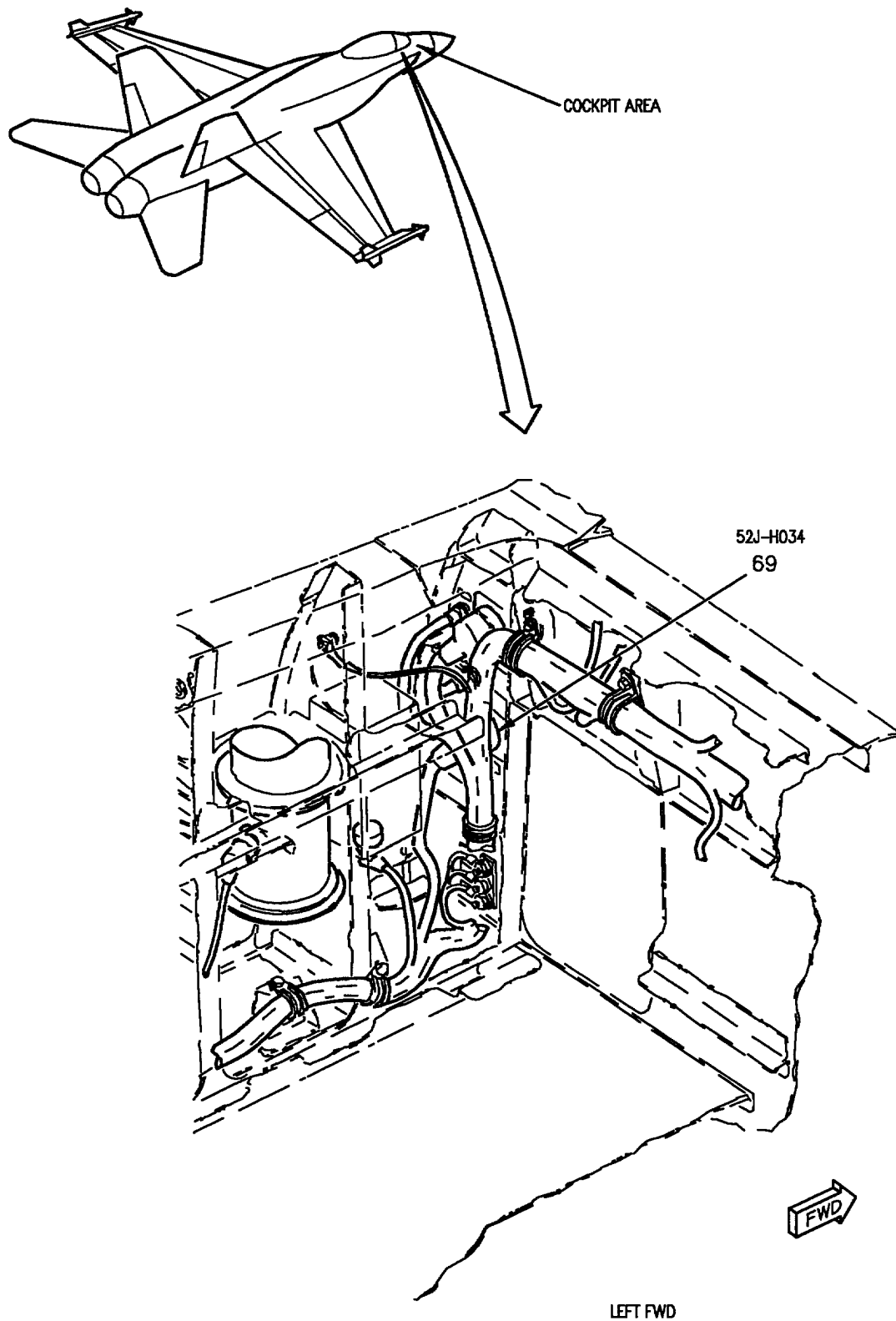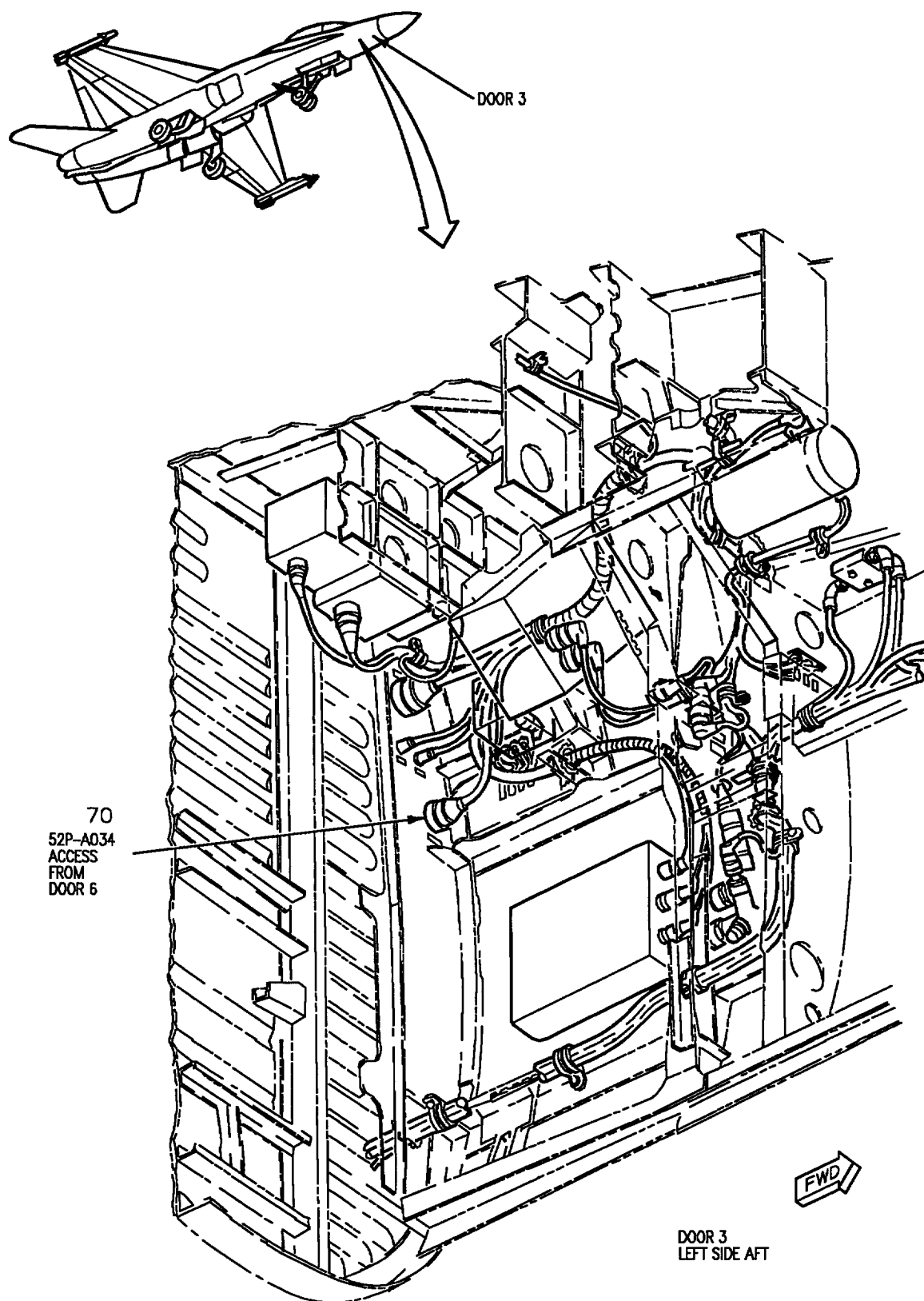
00600116

Figure 1.   Mission Computer System Component Locator (Sheet 17)

NOSE BARREL
DOOR 3
RIGHT SIDE (AFT)

00600117

Figure 1.   Mission Computer System Component Locator (Sheet 18)

DOOR 35R

71
52J-F003

FWD

DOOR 35R
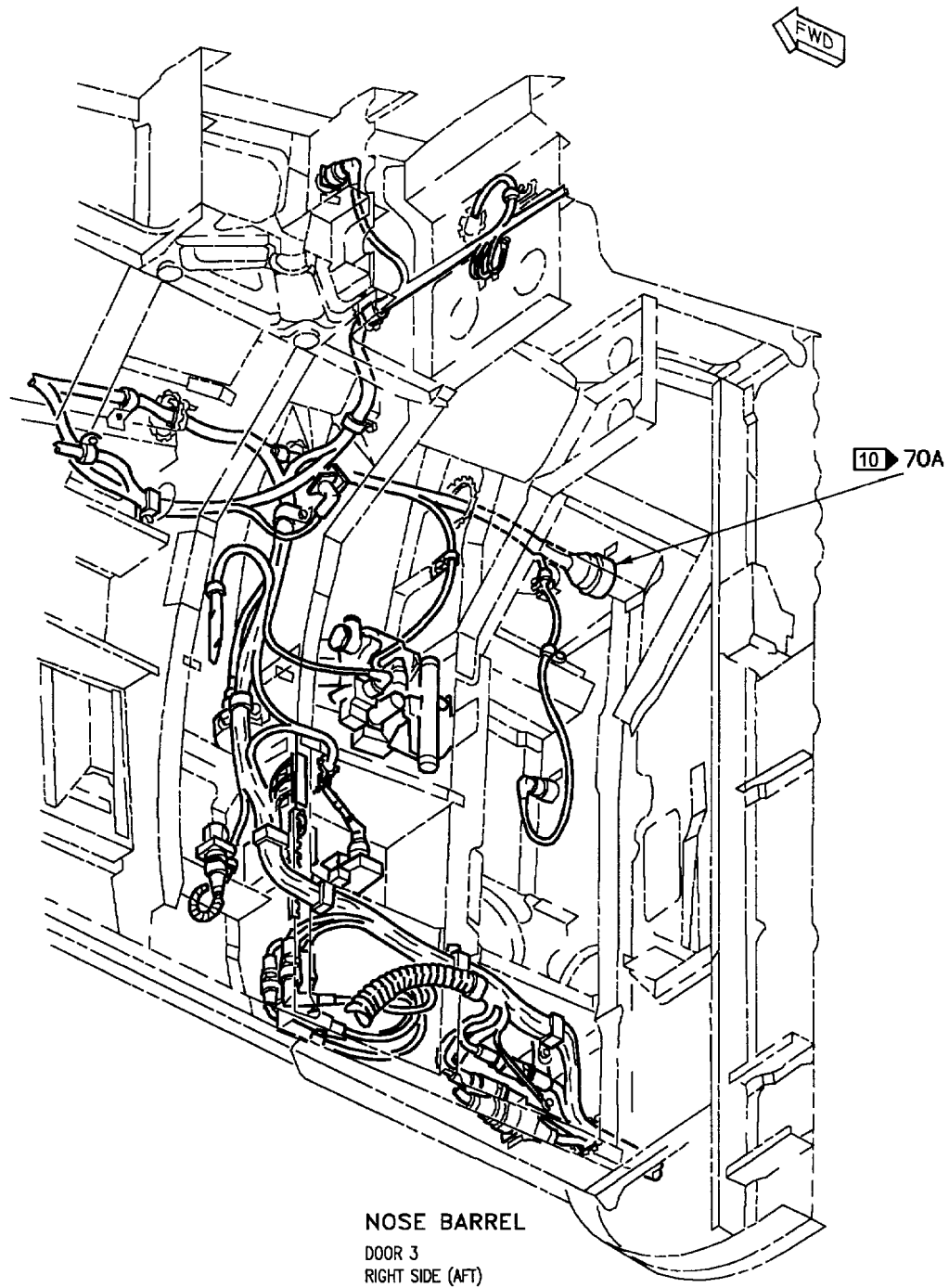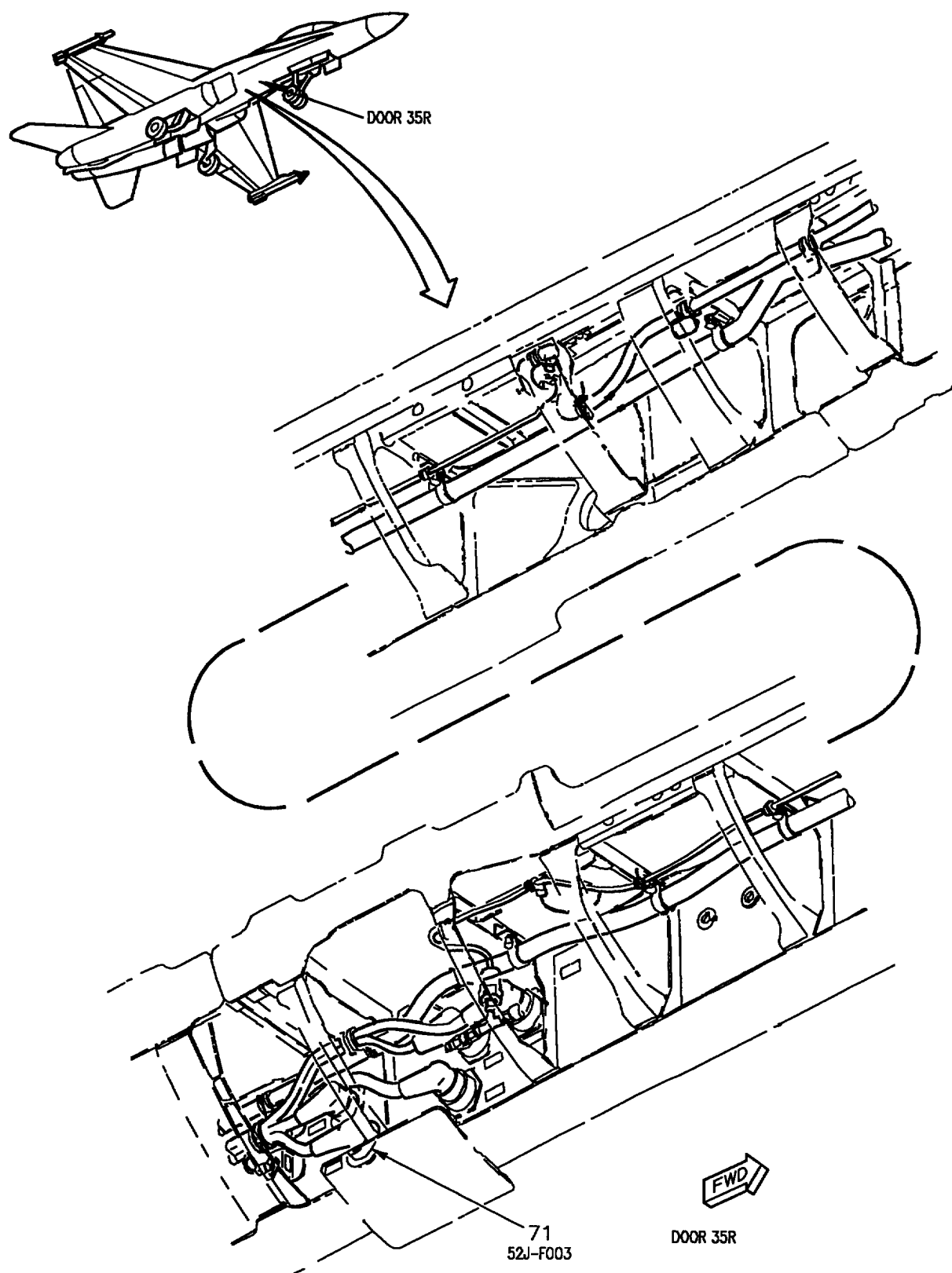
00600118

Figure 1.   Mission Computer System Component Locator (Sheet 19)

DOOR 33

DOOR 16

FWD

DOOR 16 AND DOOR 33

72

52P-F003

00600119

Figure 1.   Mission Computer System Component Locator (Sheet 20)

DOOR 35L

FWD

73
52P-E007

DOOR 35L

00600120

Figure 1.   Mission Computer System Component Locator (Sheet 21)

DOOR 13R

10 ▶ 74 A 83P–F018

WTF001
74

FWD

DOOR 13R
EQUIPMENT REMOVED

00600121

Figure 1.   Mission Computer System Component Locator (Sheet 22)

DOOR 14R

75

WTF002

DOOR 14R
EQUIPMENT REMOVED

00600122

Figure 1.   Mission Computer System Component Locator (Sheet 23)

EMI
COVER
ASSEMBLY

FWD

UPPER
EQUIPMENT
BAY

F/A-18A

76

J7/77P-L001G

J5/77P-L001E

6 77

FWD

00600123

Figure 1.   Mission Computer System Component Locator (Sheet 24)

FWD

UPPER
EQUIPMENT
BAY

EMI
COVER
SHIELD

F/A-18A

10

80

81

85P-K040A/J1

85P-K040B/J2

LEFT SIDE
SEAT RAIL
BULKHEAD

10

7 78

FWD

FWD COCKPIT

FWD

AUDIO/VISUAL
RECORDER
RO-545/AXQ
OR RO-570/AXQ
(REFERENCE
ONLY)

00600124

Figure 1.   Mission Computer System Component Locator (Sheet 25)

VIEW THRU DOOR 6
(NOSE BARREL LOOKING UP AND AFT)

00600125

Figure 1.   Mission Computer System Component Locator (Sheet 26)

84 ——→ EGI KEYFILL

82 ——→ FILL

83 ——→ LOAD OFF ZERO

68P-E011A/J1

68P-E011D/J4   68P-E011C/J3   68P-E011E/J5

85

FWD   DOOR 13L

NOSE WHEELWELL, LEFT SIDE
VIEW LOOKING AFT AND OUTBD

00600125

Figure 1.   Mission Computer System Component Locator (Sheet 27)

Nomenclature	Index No.	Ref Des
AIR DATA COMPUTER	39	70A-F001
ANTENNA SELECTOR SA-2292/A	36	76S-F004
ARMAMENT COMPUTER CP-1342/AYQ-9(V)	45	61A-F001
ATTITUDE REFERENCE INDICATOR ARU-48/A	5	33M-J015
CAUTION LIGHT INDICATOR PANEL	7	8A-J042
CKPT/FWD FUS DISC 52J-H034	69	52J-H034
CKPT/FWD FUS DISC 52P-A034	70	52P-A034
▭1▶ COCKPIT ELECTRIC LIGHT CONTROL	76	8A-L001
COMMAND LAUNCH COMPUTER	33	61A-F010
▭1▶ COMPUTER-POWER SUPPLY CP-1325/APG-65	23	60A-A505
▭2▶ COMPUTER-POWER SUPPLY CP-8318/APG-73	23	60A-A505
COMPUTER-TRANSPONDER KIT-1A/TSEC	56	78A-E003
CONTROL-CONVERTER	40	82A-F001
CONTROLLER-PROCESSOR C-10661/AAS-38	65	61A-P520
▭5▶ COUNTERMEASURES COMPUTER CP-1293/ALR-67(V)	67	62A-E006
CREW STATION ENGINE MONITOR INDICATOR AEU-12/A	12	3M-H001
DIRECTION FINDER OA-8697/ARD	26	71ARB001
DIGITAL DATA COMPUTER NO. 1	54	83A-E001
DIGITAL DATA COMPUTER NO. 2	42	83A-F002
DIGITAL DISPLAY INDICATOR ID-2150/ASM-612	64	85A-G003
▭10▶ DISCONNECT	74A	83P-F018
▭11▶ EGI DATA FILL INDICATOR	82	91CRG008
▭11▶ EGI DATA FILL SWITCH	83	91S-G007
▭11▶ EGI KEYFILL RECEPTACLE	84	91J-G009
▭11▶ EGI RECEIVER	85	68A-E011
ELECTRONIC EQUIPMENT CONTROL	13	79A-J006

Figure 1.   Mission Computer System Component Locator (Sheet 28)

Nomenclature	Index No.	Ref Des
EXTERNAL POWER CONTACTOR	52	1K-C022
FUEL QUANTITY GAGING INTERMEDIATE DEVICE	46	5A-F014
FWD/CTR FUS DISC LOWER 52J-F003	71	52J-F003
FWD/CTR FUS DISC LOWER 52P-F003	72	52P-F003
FWD/CTR FUS DISC LOWER 52P-E007	73	52P-E007
GND PWR CONTROL PANEL ASSEMBLY	11	1A-H004
HEAD-UP DISPLAY	14	79A-J001
HEAD-UP DISPLAY DISCONNECT	15	79P-J001A
HEAD-UP DISPLAY DISCONNECT	16	79P-J001B
HEIGHT INDICATOR ID-2163/A	6	67A-J002
[1] IFF SWITCH	22	78S-K005
[2] IFF SWITCH	21	78S-L005
[12] INERTIAL NAVIGATION UNIT	53	68A-E001
INTERCOMMUNICATION AMPLIFIER-CONTROL AM-6979/A OR AM-7360/A OR AM-7539/A	10	76A-H009
INTERCONNECTING BOX J-3656/ASQ-173	67	61ARR510
INTERFERENCE BLANKER MX-9965/A	37	66A-F001
[10] INTERNAL DOOR NWA RIGHT DISCONNECT	70A	52P-B042
INTR LT CONTROL BOX PANEL ASSEMBLY	8	8A-J002
[3] LANDING GEAR CONTROL UNIT	31	12A-D004
[4] LANDING GEAR CONTROL UNIT	79	12A-A004
LEFT DIGITAL DISPLAY INDICATOR IP-1317( )	1	80A-H001
LEFT POWER CONTACTOR	51	1K-C007
LH ADVISORY AND THREAT WARNING INDICATOR PANEL	2	52A-H073
LOCK/SHOOT LIGHT ASSEMBLY	3	8DSJ150

Figure 1.   Mission Computer System Component Locator (Sheet 29)

Nomenclature	Index No.	Ref Des
MC/HYD ISOL CONTROL PANEL ASSEMBLY	9	52A-H081
☐10▶ MISSION DATA LOADER MOUNT	80	85A-K040
☐10▶ MISSION DATA LOADER	81	85A-K503
MUX TEST CONNECTOR	63	83J-G003
☐10▶ ☐14▶ MUX BUS IMPEDANCE MATCHING NETWORK	86	83A-F015
MUX BUS IMPEDANCE MATCHING NETWORK (RIGHT)	48	83A-Y013
MUX BUS IMPEDANCE MATCHING NETWORK (LEFT)	55	83A-Y013
☐10▶ MUX BUS IMPEDANCE MATCHING NETWORK	87	83A-E021
☐10▶ MUX BUS IMPEDANCE MATCHING NETWORK	88	83A-F022
NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	29	52A-D024
NO. 2 RELAY PANEL ASSEMBLY	44	62A-F058
NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	28	52A-D026
☐8▶ NO. 4 CIRCUIT BREAKER PANEL DISC 52P-D026D	68	52P-D026D
☐9▶ NO. 4 CIRCUIT BREAKER PANEL DISC 52P-D026A	68	52P-D026A
☐10▶ NO. 4 CIRCUIT BREAKER PANEL DISC 52P-D026D	68	52P-D026D
NO. 4 RELAY PANEL ASSEMBLY	60	52A-N118
NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	50	52A-C057
NO. 8 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	49	52A-C159
PULSE DECODER KY-651( )/ARA-63	38	74A-F002
RADAR RECEIVER R-1623/APN	25	72REB001
RADAR RECEIVER-TRANSMITTER RT-1028/APN-202	27	72A-A002
RADIO RECEIVER R-1379( )/ARA-63	24	74REB001
☐2▶ REAR COCKPIT ELECTRIC LIGHT CONTROL	19	8A-L097
☐2▶ REAR CREW STATION ENGINE MONITOR INDICATOR AEU-12/A	17	3M-K002

Figure 1.   Mission Computer System Component Locator (Sheet 30)

Nomenclature	Index No.	Ref Des
2 ▶ REAR ELECTRONIC EQUIPMENT CONTROL	18	76A-L028
RECEIVER-TRANSMITTER RT-1015( )/APN-194(V)	59	67A-T001
RECEIVER-TRANSMITTER RT-1157( )/APX -100(V)	58	78A-E001
RECEIVER-TRANSMITTER RT-1159/A	32	69A-F001
RECEIVER-TRANSMITTER RT-1250( )/ARC NO. 1	35	76A-F001
10 ▶ RECEIVER-TRANSMITTER RT-1556( )/ARC NO. 1	35	76A-F041
RECEIVER-TRANSMITTER RT-1250( )/ARC NO. 2	41	76A-F002
10 ▶ RECEIVER-TRANSMITTER RT-1556( )/ARC NO. 2	41	76A-F042
2 ▶ RECEIVER-TRANSMITTER PROCESSOR RT-1379( )/ASW	20	77A-K001
6 ▶ RECEIVER-TRANSMITTER PROCESSOR RT-1379( )/ASW	77	77A-L001
7 ▶ RECEIVER-TRANSMITTER PROCESSOR RT-1379( )/ASW	78	77A-L001
RESERVOIR	61	10HPP006
RESERVOIR	62	10HPR007
RIGHT DIGITAL DISPLAY INDICATOR IP-1317(V)	4	80A-J002
RIGHT POWER CONTACTOR	30	1K-D008
ROLL-PITCH-YAW COMPUTER (FCCA)	34	84A-F001
ROLL-PITCH-YAW COMPUTER (FCCB)	43	84A-F002
SIGNAL DATA RECORDER RO-508/ASM-612	47	85A-F001
SPLICE WTF001	74	WTF001
SPLICE WTF002	75	WTF002

Figure 1.   Mission Computer System Component Locator (Sheet 31)

LEGEND

[1] ▶ F/A-18A.

[2] ▶ F/A-18B.

[3] ▶ 161353 THRU 161987 BEFORE F/A-18 AFC 48.

[4] ▶ 162394 AND UP; ALSO 161353 THRU 161987 AFTER F/A-18 AFC 48.

[5] ▶ 161702 AND UP.

[6] ▶ F/A-18A 161353 THRU 161628.

[7] ▶ F/A-18A 161702 AND UP.

[8] ▶ 161353 THRU 161359.

[9] ▶ 161360 AND UP.

[10] ▶ F/A-18A 162394 THRU 163175 AFTER F/A-18 AFC-253 OR F/A-18 AFC-292.

[11] ▶ F/A-18A/B AFTER F/A-18 AFC 225 AND F/A-18 AFC 231; ALSO F/A-18A AFTER F/A-18 AFC 231 PART 2 OR PART 3.

[12] ▶ F/A-18A/B BEFORE F/A-18 AFC 231; ALSO F/A-18A BEFORE F/A-18 AFC 231 PART 2 OR PART 3.

[13] ▶ F/A-18A/B BEFORE F/A-18 AFC 225.

[14] ▶ F/A-18A/B AFTER F/A-18 AFC 225.

Figure 1.   Mission Computer System Component Locator (Sheet 32)

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

CIRCUIT BREAKERS

MISSION COMPUTER SYSTEM

Reference Material

None

Alphabetical Index

Record of Applicable Technical Directives

None

DOOR 10R

DOOR 10L
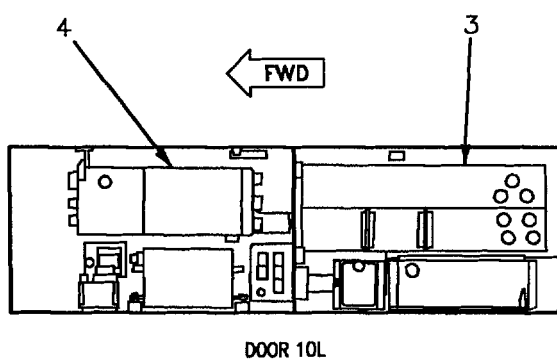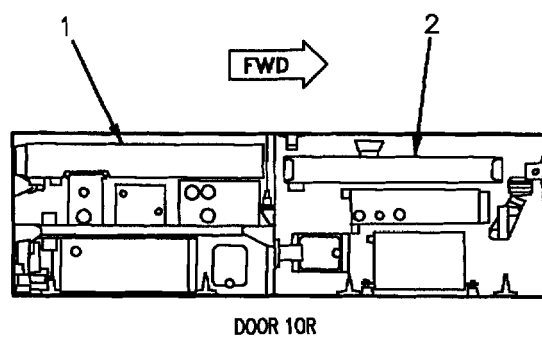
NOMENCLATURE	INDEX	REF DES
NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	2	52A-D024
NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	1	52A-D026
NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	3	52A-C057
NO. 8 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	4	52A-C159

00700101

Figure 1.   Circuit Breakers (Sheet 1)

52A-D026		NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	2
ZONE	REF DES	NOMENCLATURE	BUS
B12	82CBD005	CSC	R28VDC
C7	82CBD004	CSC	R115VACφC
C8	82CBD003	CSC	R115VACφB
C9	82CBD002	CSC	R115VACφA

52A-D026		NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	3
ZONE	REF DES	NOMENCLATURE	BUS
B3	82CBD005	CSC	R28VDC

52A-D024		NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	2
ZONE	REF DES	NOMENCLATURE	BUS
A11	80CBD007	MFD	R115VACφA
A12	83CBD009	MISSION CMPTR NO. 2	R115VACφA
A20	71CBD002	ADF	R26VACφC
B11	80CBD008	MFD	R115VACφB
B12	83CBD010	MISSION CMPTR NO. 2	R115VACφB
C11	80CBD009	MFD	R115VACφC
C12	83CBD011	MISSION CMPTR NO. 2	R115VACφC

52A-D024		NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	3
ZONE	REF DES	NOMENCLATURE	BUS
A11	82CBD002	CSC	R115VACφA
A17	80CBD007	MFD	R115VACφA
A18	82CBD009	MISSION CMPTR NO. 2	R115VACφA
B11	82CBD003	CSC	R115VACφB
B17	80CBD008	MFD	R115VACφB
B18	83CBD010	MISSION CMPTR NO. 2	R115VACφB
C11	82CBD004	CSC	R115VACφC
D6	71CBD002	ADF	R26VACφC
D7	80CBD009	MFD	R115VACφC
D8	83CBD011	MISSION CMPTR NO. 2	R115VACφC

Figure 1.   Circuit Breakers (Sheet 2)

52A-C057		NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	
ZONE	**REF DES**	**NOMENCLATURE**	**BUS**
A20	83CBC006	MISSION CMPTR NO. 1	L115VACφA
B6	1CBC048	GND PWR CONT	L28VDC
B20	83CBC007	MISSION CMPTR NO. 1	L115VACφB
C20	83CBC008	MISSION CMPTR NO. 1	L115VACφC

52A-C159		NO. 8 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	
ZONE	**REF DES**	**NOMENCLATURE**	**BUS**
D2	85CBC004	MSDRS	MAINT. 24/28VDC
D12	80CBC006	MMD	L115VACφC
E12	80CBC005	MMD	L115VACφB
F12	80CBC004	MMD	L115VACφA

LEGEND

1. Aircraft connector locations are shown in A1-F18A( )-WDM-000.

2 161353 thru 161359.

3 161360 and up.

Figure 1.   Circuit Breakers (Sheet 3)

ORGANIZATIONAL MAINTENANCE
TESTING AND TROUBLESHOOTING
TROUBLESHOOTING PROCEDURES
MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	-	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	-
F/A-18 AFC 292	-	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	-
F/A-18 AFC 225	-	Five (5) Avionics Multiplex Bus Upgrade, Incorporation of (ECP MDA-F/A-18 0529)	15 Jan 03	-
F/A-18 AFC 231	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-
F/A-18 AFC 231 Part 2 or Part 3	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-

Table 1.   Maintenance Action for System Maintenance Codes

Maintenance Code	Troubleshooting For System Maintenance Codes
	NOTE
	For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.
	CAUTION
	To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale.
	NOTE
	The question used in logic tree "Does continuity exist" means to test for the items listed below:
	1. Pin to pin test per procedural step. 2. Shorts to ground. 3. Shorts between surrounding pins on connectors. 4. Shorts between shield and conductors. 5. Shield continuity.
[1]▶ 029	1. Replace digital data computer no. 2 (A1-F18AC-741-300, WP004 00). 2. Troubleshoot MC2 Terminal Fail 029 Remains, table 2.
[1]▶ 004	1. Replace Control-Converter C-10382/A (A1-F18AC-741-300, WP005 00). 2. Troubleshoot CSC Terminal Fail 004 Remains, table 4.

[1]▶ If WRA was replaced and malfunction still exists, start troubleshooting at step 2.

Table 2.   MC2 Terminal Fail 029 Remains

Support Equipment Required

Part Number or Type Designation	Nomenclature
1502-04	Time Domain Reflectometer
74D420048-1001	TDR Adapter Kit

Materials Required

None

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

NOTE
Avionic Mux Bus Schematics (A1-F18AC-741-500) may be used as an aid while doing this procedure. For component locator, refer to WP006 00. Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low wires must be open to indicate a terminal fail). This troubleshooting procedure isolates from the system component to one or more avionic mux bus wires. Additional troubleshooting may be required to isolate to the second defective wire/ component. For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes

a.   Do substeps below:
 	
    (1)   Using table 8 and table 9, memory inspect unit address 28, ref code BDMUX1.
 	
    (2)   On right digital display indicator (RDDI), does DATA readout display any of the below (figure 2, detail D):
 	
    X2XXXX
    X6XXXX? . . . .
	m	b

b.   Do substeps below:
 	
    (1)   On RDDI, set power switch to OFF.
 	
    (2)   Remove electrical power (A1-F18AC-LMM-000).
 	
    (3)   Open door 33 (A1-F18AC-LMM-010).
 	
    (4)   Disconnect FWD/CTR FUS DISC LOWER 52P-F003.
 	
    (5)   Open door 14R (A1-F18AC-LMM-010).
 	
    (6)   Disconnect 83P-F002D from digital data computer no. 2.
 	
    (7)   Disconnect 83P-F004 from right mux bus impedance matching network.
 	
    (8)   Using time domain reflectometer (A1-F18AC-WRM-000) and table 3, test wiring from:
 	
    83P-F002D pin 23 to 52P-F003 pin 23
    83P-F002D pin 24 to 62P-F003 pin 24
 	
      Does wiring test good? . . . .
	c	d

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes

c.   Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
     83P-F002D pin 23 to 52P-F003 pin 23
     83P-F002D pin 24 to 52P-F003 pin 24
 	
  and do step v. ....
	-	-

d.   Do substeps below:
 	
(1)   Open door 35L (A1-F18AC-LMM-010).
 	
(2)   Disconnect FWD/CTR FUS DISC LOWER 52P-E007.
 	
(3)   If Laser Detector Tracker System is installed, open Mounting Adapter MT-6082/ASQ-173 access door 2 and disconnect 5W1P2 from Interconnecting Box J-3656/ASQ-173.
 	
(4)   If NAVFLIR system installed, open Mounting Adapter MT-6512/AAR-50 access door 2 and disconnect 5W1P2 from Digital Computer-Converter CP-1805/AAR-50.
 	
(5)   If forward looking infrared system installed, remove Controller-Processor C-10661/AAS-38 (A1-F18AC-744-300, WP009 00).
 	
(6)   Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:
 	
     52J-F003 pin 23 to 52P-E007 pin 69
     52J-F003 pin 24 to 52P-E007 pin 80
 	
  Does wiring test good? ....
	e	h

e.   Do substeps below:
 	
(1)   Remove door 120R (A1-F18AC-LMM-010).
 	
(2)   Repair defective aircraft wiring (A1-F18AC-WRM-000) from:
 	
     52J-F003 pin 23 to 61J-R111A pin S001
     52J-F003 pin 24 to 61J-R111A pin S002
 	
  and do step v. ....
	-	-

▸ 1 (3)   Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:
 	
     52J-F003 pin 23 to 61J-R110B pin 20
     52J-F003 pin 24 to 61J-R110B pin 21
 	
  Does wiring test good? ....
	f	g

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes
☐1► f. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
52J-F003 pin 23 to 61J-P110B pin S002 52J-F003 pin 24 to 61J-P110B pin S001		
and do step v.	-	-
☐1► g. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
52J-E007 pin 69 to 61J-P110B pin S002 52J-E007 pin 80 to 61J-P110B pin S001		
and do step v.	-	-
☐1► h Do substeps below:		
(1) Open internal door NWA right (A1-F18AC-LMM-010).		
(2) Disconnect 52P-B042.		
(3) Disconnect 83P-F002H from digital data computer no. 2.		
(4) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
83P-F002H pin 14 to 52P-B042 pin 88 83P-F002H pin 15 to 52P-B042 pin 87		
Does wiring test good?	i	j
☐1► i. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
83P-F002H pin 14 to 52P-B042 pin 88 83P-F002H pin 15 to 52P-B042 pin 87		
and do step v.	-	-
☐1► j. Do substeps below:		
(1) Disconnect 83P-F018.		
(2) Disconnect 83P-F015 from mux bus impedence matching network.		
(3) Disconnect 83P-F002L from digital data computer no. 2.		
(4) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
83P-F002L pin 14 to 83P-F018 pin 22 83P-F002L pin 15 to 83P-F018 pin 21		
Does wiring test good?	k	l

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes
1 ▶ k. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
83P-F002L pin 14 to 83P-F018 pin 22 83P-F002L pin 15 to 83P-F018 pin 21		
and do step v.	-	-
1 ▶ l. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
83P-F002D pin 5 to wire tie WTF002 splice 109 83P-F002D pin 6 to wire tie WTF002 splice 110		
and do step v.	-	-
m. Do substeps below:		
(1) On RDDI, set power switch to OFF.		
(2) Remove electrical power (A1-F18AC-LMM-000).		
(3) Open door 14R (A1-F18AC-LMM-010).		
(4) Disconnect 83P-F002E from digital data computer no. 2.		
(5) Disconnect 83P-F004 from right mux bus impedance matching network.		
(6) Open door 33 (A1-F18AC-LMM-010).		
(7) Disconnect FWD/CTR FUS DISC LOWER 52P-F003.		
(8) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
83P-F002E pin 23 to 83P-F003 pin 69 83P-F002E pin 24 to 83P-F003 pin 58		
Does wiring test good?	n	o
n. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
83P-F002E pin 23 to 52P-F003 pin 69 83P-F002E pin 24 to 52P-F003 pin 58		
and do step v.	-	-
o. Do substeps below:		
(1) Open door 35L (A1-F18AC-LMM-010).		
(2) Disconnect FWD/CTR FUS DISC LOWER 52P-E007.		

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes
(3) If laser detector tracker system installed, open Mounting Adapter MT-6082/ASQ-173 access door 2 and disconnect 5W1P2 from Interconnecting Box J-3656/ASQ-173.		
(4) If NAVFLIR system installed, open Mounting Adapter MT-6512/AAR-50 access door 2 and disconnect 5W1P2 from Digital Computer-Converter CP-1805/AAR-50.		
(5) If forward looking infrared system installed, remove Controller-Processor C-10661/AAS-38 (A1-F18AC-744-300, WP009 00).		
(6) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
52J-F003 pin 58 to 52P-E007 pin 110 52J-F003 pin 69 to 52P-E007 pin 111		
Does wiring test good?	p	q
p. Do substeps below:		
(1) Remove door 120R (A1-F18AC-LMM-010).		
(2) Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
52J-E003 pin 58 to 61J-R111A pin S004 52J-E003 pin 69 to 61J-R111A pin S003		
and do step v.	-	-
1 ▶ q. Do substeps below:		
(1) Open internal door NWA right (A1-F18AC-LMM-010).		
(2) Disconnect 52P-B042.		
(3) Disconnect 83P-F002H from digital data computer no. 2.		
(4) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
83P-F002H pin 19 to 52P-B042 pin 86 83P-F002H pin 20 to 52P-B042 pin 74		
Does wiring test good?	r	s
1 ▶ r. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
83P-F002H pin 19 to 52P-B042 pin 86 83P-F002H pin 20 to 52P-B042 pin 74		
and do step v.	-	-

Table 2.   MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes
⬛1▶ s. Do substeps below:		
(1) Disconnect 83P-F018.		
(2) Disconnect 83P-F015 from mux bus impedence matching network.		
(3) Disconnect 83P-F002L from digital data computer no. 2.		
(4) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 3, test wiring from:		
83P-F002L pin 19 to 83P-F018 pin 20 83P-F002L pin 20 to 83P-F018 pin 19		
Does wiring test good?	t	u
⬛1▶ t. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
83P-F002L pin 19 to 83P-F018 pin 20 83P-F002L pin 20 to 83P-F018 pin 19		
and do step v.	-	-
u. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
83P-F002E pin 5 to WTF004 pin 30 83P-F002E pin 6 to WTF004 pin 29		
and do step v.	-	-
v. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 83P-F002C		
(2) 83P-E001C		
(3) 82P-17001A		
(4) 52P-F058C		
(5) 52P-F058E		
(6) 12P-A004A		
(7) 52P-E007		
(8) Mounting Adapter MT-6082/ASQ-173 access door 2		

Table 2. MC2 Terminal Fail 029 Remains (Continued)

Procedure	No	Yes
(9) 5W1P2		
(10) Controller-Processor C-10661/AAS-38		
(11) 83P-F002E		
(12) Door 120R		
⬜1▶ (13) Mounting Adapter MT-6512/AAR-50 access door 2		
⬜1▶ (14) Internal door NWA right		
⬜1▶ (15) 52P-B042		
⬜1▶ (16) 83P-F002H		
⬜1▶ (17) 83P-F018		
⬜1▶ (18) 83P-F015		
⬜1▶ (19) 83P-F002L		
LEGEND		
⬜1▶ On F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.		

Table 3. Avionic Mux Cable Parameters

Cable Number	Connector	Impedance (Ohms)	Dielectric Type	Cable Length (Inches)
U603W	83P-F002E pin 5 to 52P-A034 pin 96	68	PTFE	409 ◀1⬜ 406 ◀2⬜
U504W	83P-F002E pin 6 to 52P-A034 pin 84	68	PTFE	409 ◀1⬜ 406 ◀2⬜
U505U	83P-F002D pin 23 to 52P-F003 pin 23	68	PTFE	105 ◀1⬜ 132 ◀2⬜
U506U	83P-F002D pin 24 to 52P-F003 pin 24	68	PTFE	105 ◀1⬜ 132 ◀2⬜
U505R	52J-F003 pin 23 to 52P-E007 pin 69	68	PTFE	349
U506R	52J-F003 pin 24 to 52P-E007 pin 80	68	PTFE	349

Table 3.   Avionic Mux Cable Parameters (Continued)

Cable Number	Connector	Impedance (Ohms)	Dielectric Type	Cable Length (Inches)
U507L	52J-E007 pin 110 to 60J-A001B pin 92	68	PTFE	309 ◁ 1 ▷ 302 ◁ 2 ▷
U508L	52J-E007 pin 111 to 60J-A001B pin 91	68	PTFE	309 ◁ 1 ▷ 302 ◁ 2 ▷
U507W	83P-F002E pin 23 to 52P-F003 pin 69	68	PTFE	108 ◁ 1 ▷ 135 ◁ 2 ▷
U508W	83P-F002E pin 24 to 52P-F003 pin 58	68	PTFE	108 ◁ 1 ▷ 135 ◁ 2 ▷
U507T	52J-F003 pin 69 to 52P-E007 pin 111	68	PTFE	407
U508T	52J-F003 pin 58 to 52P-E007 pin 110	68	PTFE	407
U1130A	83P-F002L pin 14 to 83P-F018 pin 21	68	PTFE	127 ◁ 3 ▷
U1131A	83P-F002L pin 15 to 83P-F018 pin 22	68	PTFE	127 ◁ 3 ▷
U1132A	83P-F002L pin 19 to 83P-F018 pin 20	68	PTFE	127 ◁ 3 ▷
U1133A	83P-F002L pin 20 to 83P-F018 pin 19	68	PTFE	127 ◁ 3 ▷
U1163B	83P-F002H pin 14 to 83P-B042 pin 88	68	PTFE	315 ◁ 3 ▷
U1164B	83P-F002H pin 15 to 83P-B042 pin 87	68	PTFE	315 ◁ 3 ▷
U1165B	83P-F002H pin 19 to 83P-B042 pin 86	68	PTFE	315 ◁ 3 ▷
U1166B	83P-F002H pin 20 to 83P-B042 pin 74	68	PTFE	315 ◁ 3 ▷

LEGEND

◁ 1 ▷   F/A-18A.
◁ 2 ▷   F/A-18B.
◁ 3 ▷   F/A-18 162394 thru 163175 with Digital Data Computer CONFIG/IDENT 15C and up.

Table 4. CSC Terminal Fail 004 Remains

	No	Yes
Support Equipment Required None **Materials Required** None **NOTE** Avionic Mux Bus Schematics (A1-F18AC-741-500) may be used as an aid while doing this procedure. For component locator, refer to WP006 00. Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionics mux bus 2X high and 2X low must be open to indicate a terminal fail). This troubleshooting procedure isolates from the system component to the splice point on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component. For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI. Malfunction is caused by aircraft wiring.		

Procedure	No	Yes

a. Do substeps below:
 	
   (1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 7).
 	
   (2) On RDDI, does DATA readout display any of the below (figure 2, MEMORY INSPECT DISPLAY):
 	
      XXXX2X
      XXXX3X
      XXXX6X
      XXXX7X? . . . .
	c	b

b. Do substeps below:
 	
   (1) On RDDI, set power switch to OFF.
 	
   (2) Remove electrical power (A1-F18AC-LMM-000).
 	
   (3) Open door 13R (A1-F18AC-LMM-010).
 	
   (4) Disconnect 82P-F001B from control-converter.		

Table 4.   CSC Terminal Fail 004 Remains (Continued)

Procedure	No	Yes

(5)   Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
    82P-F001B pin 1 to splice WTF001 pin 260
    82P-F001B pin 2 to splice WTF001 pin 262
 	
and do step d. . . . .
	-	-

c. Do substeps below:		
(1) On RDDI, set power switch to OFF.		
(2) Remove electrical power (A1-F18AC-LMM-000).		
(3) Open door 13R (A1-F18AC-LMM-010).		
(4) Disconnect 82P-F001B from control-converter.		

(5)   Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
    82P-F001B pin 4 to splice WTF001 pin 263
    82P-F001B pin 11 to splice WTF001 pin 265
 	
and do step d. . . . .
	-	-

d. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 82P-F001B		
(2) Door 13R	-	-

Table 5.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain in 1 OFF Position

Support Equipment Required

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or
Type Designation   **Nomenclature**

77/BN   Multimeter

**Table 5.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain in 1
OFF Position (Continued)**

Materials Required

None

NOTE

AC/DC Power Schematic (A1-F18AC-741-600, WP009 00) may be used as an aid
when doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
MC/HYD ISOL Control Panel Assembly
No. 7 Circuit Breaker/Relay Panel Assembly
Relay 1K-C083
Relay 1K-C106
Relay 1K-C112

Procedure	No	Yes

CAUTION

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale. Pin to pin tests that do not go through
switches/relay contacts may use the RX1 scale.

To prevent damage to aircraft wiring or equipment, make sure multimeter leads/jumper
wires are installed on correct pins. When electrical power is off, 24vdc battery voltage
exists on some pins of connectors listed below:

52P-C057E

NOTE

The question used in logic tree "Does continuity exist" means to test for the items listed
below:

1.   Pin to pin test per procedural step.
2.   Shorts to ground.
3.   Shorts between surrounding pins on connectors.
4.   Shorts between shield and conductors.
5.   Shield continuity.

**Table 5. MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain in 1
OFF Position (Continued)**

Procedure	No	Yes
a. Do substeps below:		
(1) Remove MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00).		
(2) Turn on electrical power (A1-F18AC-LMM-000).		
(3) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(4) Does 28VDC exist from 52P-H081 pin 14 to ground?	b	e
b. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 10L (A1-F18AC-LMM-010).		
(3) Disconnect 52P-C057D from no. 7 circuit breaker/relay panel assembly.		
(4) Does continuity exist from 52P-C057D pin 48 to 52P-H081 pin 14?	c	d
c. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step k.	-	-
d. Isolate between 1K-C112 and no. 7 circuit breaker/relay panel assembly (A1-F18AC-420-300, WP027 00) and do step k.	-	-
e. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 10L (A1-F18AC-LMM-010).		
(3) Disconnect 52P-C057E from no. 7 circuit breaker/relay panel assembly.		
(4) Does continuity exist from:		

52P-C057E pin 63 to 52P-H081 pin 13
        52P-C057E pin 52 to 52P-H081 pin 15
        52P-H081 pin 17 to aircraft ground? . . . .
	c	f

f. Do substeps below:		
(1) Install MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00).		
(2) Remove relay 1K-C083 from no. 7 circuit breaker/relay panel assembly (A1-F18AC-420-300, WP027 00).		
(3) Does continuity exist from 52J-C057E pin 52 to relay 1K-C083 socket X1?	g	h

Table 5.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain in 1 OFF Position (Continued)

Procedure	No	Yes
g. Isolate between no. 7 circuit breaker/relay panel assembly wiring and relay 1K-C106 (A1-F18AC-420-300, WP027 00) and do step k.	-	-
h. Do substeps below:		
(1) Connect 52P-C057E to no. 7 circuit breaker/relay panel assembly.		
(2) Install jumper wire from relay 1K-C083 socket D2 to X2.		
(3) Turn on electrical power (A1-F18AC-LMM-000).		
(4) ON GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(5) On MC/HYD ISOL control panel assembly, set MC switch to 1 OFF.		
(6) Does switch remain in 1 OFF position?	i	j
i. Replace MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00) and do step k.	-	-
j. Isolate between no. 7 circuit breaker/relay panel assembly wiring and relay 1K-C083 (A1-F18AC-420-300, WP027 00) and do step k.	-	-
k. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00)		
(2) 52P-C057D		
(3) 52P-C057E		
(4) Relay 1K-C083		
(5) Remove jumper wire		
(6) Door 10L	-	-

Table 6.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain In 2 OFF Position

Support Equipment Required		

NOTE

Alternate item type designations or part numbers are listed in parentheses.

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

AC/DC Power Schematic (A1-F18AC-741-500, WP009 00) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
MC/HYD ISOL Control Panel Assembly
No. 2 Relay Panel Assembly
No. 7 Circuit Breaker/Relay Panel Assembly
Relay 1K-C112
Relay 1K-F082

Procedure	No	Yes

CAUTION

To prevent damage to low level devices (switches/relay contacts), do not test for continuity with multimeter on the RX1 scale. Pin to pin tests that do not go through switches/relay contacts may use the RX1 scale.

To prevent damage to aircraft wiring or equipment, make sure multimeter leads/jumper wires are installed on correct pins. When electrical power is off, 24vdc battery voltage exists on some pins of connectors listed below:

52P-C057E

Table 6.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain In 2 OFF Position (Continued)

Procedure	No	Yes
NOTE		
The question used in logic tree "Does continuity exist" means to test for the items listed below:		
1. Pin to pin test per procedural step.		
2. Shorts to ground.		
3. Shorts between surrounding pins on connectors.		
4. Shorts between shield and conductors.		
5. Shield continuity.		
a. Do substeps below:		
(1) Remove MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00).		
(2) Turn on electrical power (A1-F18AC-LMM-000).		
(3) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds.		
(4) Does 28VDC exist from 52P-H081 pin 14 to ground?	b	e
b. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 10L (A1-F18AC-LMM-010).		
(3) Disconnect 52P-C057D from no. 7 circuit breaker/relay panel assembly.		
(4) Does continuity exist from 52P-C057D pin 48 to 52P-H081 pin 14?	c	d
c. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step j.	-	-
d. Isolate between 1K-C112 and no. 7 circuit breaker/relay panel assembly (A1-F18AC-420-300, WP027 00) and do step j.	-	-
e. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Open door 10L (A1-F18AC-LMM-010).		
(3) Disconnect 52P-C057E from no. 7 circuit breaker/relay panel assembly.		
(4) Open door 14R (A1-F18AC-LMM-010).		
(5) Disconnect 52P-F058E from no. 2 relay panel assembly.		

Table 6.   MC/HYD ISOL Control Panel Assembly MC Switch Does Not Remain In 2 OFF Position (Continued)

Procedure	No	Yes

(6)   Does continuity exist from:
 	
  52P-H081 pin 13 to 52P-F058E pin 26
  52P-H081 pin 18 to 52P-C057E pin 105
  52P-H081 pin 17 to aircraft ground
  52P-C057E pin 94 to 52P-F058E pin 72
  52P-F058E pin 61 to aircraft ground? . . . .
	c	f

f. Does continuity exist from 52J-C057E pin 94 to 105?	d	g
g. Do substeps below: (1) Connect 52P-C057E on no. 7 circuit breaker/relay panel assembly. (2) Install MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00). (3) Install jumper wire from 52P-F058E pin 26 and pin 61. (4) Turn on electrical power (A1-F18AC-LMM-000). (5) On GND PWR control panel assembly, set and hold 1 switch to B ON for 3 seconds. (6) On MC/HYD ISOL control panel assembly, set MC switch to 2 OFF. (7) Does switch remain in 2 OFF position?	 h	 i
h. Replace MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00) and do step j.	-	-
i. Isolate between no. 2 relay panel assembly wiring and relay 1K-F082 (A1-F18AC-420-300, WP032 00) and do step j.	-	-
j. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed: (1) MC/HYD ISOL control panel assembly (A1-F18AC-741-300, WP008 00) (2) 52P-C057D (3) 52P-C057E (4) 52P-F058E (5) Remove jumper wire (6) Door 14R (7) Door 10L	 -	 -

Table 7.   Memory Inspect Procedure

NOTE

The CONFIG/IDENT number must be known to accurately memory inspect a compo-
nent. If the CONFIG/IDENT number is not known, refer to A1-F18AC-SCM-000 to
determine the CONFIG/IDENT number.

a.   Determine the CONFIG/IDENT number of MC1 (digital data computer no. 1), (A1-F18AC-SCM-000):

b.   Use ref code identified in procedure and CONFIG/IDENT from step a to determine ref code memory inspect (MI)
address from Table 8.

NOTE

Figure 2 shows memory inspect displays.

c.   Apply electrical power (A1-F18AC-LMM-000).

d.   On GND PWR control panel assembly, set and hold 1 switch to A ON and 2 switch to B ON for 3 seconds.

e.   On left and right Digital Display Indicators IP-1317( ) (LDDI and RDDI), set power switches to DAY or NIGHT and
allow 2 minute warmup. Adjust BRT and CONT controls for best display.

f.   On RDDI:

   (1)   Press MENU pushbutton switch until BIT pushbutton switch option is displayed.

   (2)   Press BIT pushbutton switch.

   (3)   Press MI pushbutton switch.

g.   On electronic equipment control (equipment control), adjust BRT/DIM control for best display and do
substeps below:

   (1)   Verify equipment control displays UNIT and ADDR options.

   (2)   Press UNIT option select switch.

   (3)   Press keyboard switch(es) to enter UNIT address from procedure.

   (4)   Verify scratch pad displays correct UNIT address.

   (5)   Press ENT.

NOTE

On RDDI, unit address is a two digit display. When unit address is a single digit, a 0
(zero) is displayed before the unit address. Example - unit address 6 is displayed as 06.

h.   Verify RDDI displays correct unit address.

Table 7.   Memory Inspect Procedure (Continued)

i.   On equipment control, do substeps below:

   (1)   Press ADDR option keyboard switch.

   (2)   Press keyboard switches to enter applicable ref code MI address.

   (3)   Verify scratch pad displays correct address.

   (4)   Press ENT.

NOTE

   On RDDI, ADDR readout is a six digit display. When ref code address is less than six digits, a 0 (zero) is displayed before the address. Example - address 4444 is displayed as 004444.

1▶   WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000), ref code addressing is eight octal digits. When ref code address is less than eight digits, a 0 (zero) is displayed before the address. Example - address 7004444 is displayed as 07004444.

j.   Verify RDDI displays correct address.

NOTE

   DDI DATA readout is 6 octal digits, when an X is indicated in an octal digit location in this procedure, that digit is ignored.

k.   Interpret DATA readout.

NOTE

   When memory inspecting more than one address and the address numbers are close, use the address increment/decrement pushbutton switches on MI display to advance/decrease the address. Pressing the increment pushbutton switch increases the address location by one. Pressing the decrement switch decreases the address location by one.

LEGEND

1▶   On F/A-18A, 162394 thru 163175 after F/A-18 AFC253 or F/A-18 AFC 292.

Table 8. Unit Address 28 (MC1) MI Addresses

NOTE

For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.

REF CODE	SOFTWARE CONFIGURATION (CONFIG/IDENT)						
	85A Address	87X Address	89A Address	92A Address	15C Address	12A Address	10A Address
[1] BDMUX1	014406	002364	002422	002424	07073406		002426
[1] BTMUX1						004226	
[2] BDMUX1	014407	002365	002423	002425	07073460		002426
[2] BTMUX1						004226	
[4] IKMD14					07016127	047177	040310
[5] I1DPC1					00021403		
[3] XPWRIA			000603	000605	00000161	000676	000605
[3] XIFLCT			000527	000527	00000144	000617	000527
[3] XISCFC			000530	000530	00000145	000620	000530

LEGEND

[1] Code 029
[2] Code 004
[3] Intermittent MC Shutdown
[4] Code 038 and/or 039
[5] Code 424

Table 9.   Intermittent Displays And All Displays Flashing STANDBY

Support Equipment Required		

None

Materials Required

None

NOTE

Avionic Mux Bus Schematics (A1-F18AC-741-500) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

Data resident in memory for ref codes XPWRIA, XIFLCT and XISCFC is cumulative and can only be reset by reloading operational flight program (OFP) in the computer being memory inspected (A1-F18AC-SCM-000, WP004 00).

Ref code XPWRIA stores the number of times the digital data computer shutdown due to input power failures.

Ref code XIFLCT stores the number of times the digital data computer detected an internal failure.

Ref code XISCFC stores the number of times the digital data computer detected errors with the mux communication with the opposite digital data computer's mux communication (usually caused by WRA interference with mux bus message traffic).

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

  Generator Control Unit
  Digital Data Computer No. 1
  Digital Data Computer No. 2

Procedure	No	Yes
a. Memory inspect digital data computer no. 1 by doing substeps below:		
NOTE For a properly operating system ref codes XPWRIA, XIFLCT and XISCFC data should be at or near zero for both digital data computers. Because the registers are cumulative a failure is indicated when all three registers in both digital data computers are checked and data in any one of the registers is significantly higher than zero.		
(1) Using table 8 and unit address 28 and table 7, memory inspect address for ref code XPWRIA and record data.		

Table 9.   Intermittent Displays And All Displays Flashing STANDBY (Continued)

Procedure	No	Yes
(2) Using table 8 and unit address 28 and table 7, memory inspect address for ref code XIFLCT and record data.		
(3) Using table 8 and unit address 28 and table 7, memory inspect address for ref code XISCFC and record data.		
(4) Compare recorded data. Is data value of any of the ref codes significantly greater than zero?	b	c
b. Memory inspect digital data computer no. 2 by doing substeps below:		
NOTE		
For a properly operating system ref codes XPWRIA, XIFLCT and XISCFC data should be at or near zero for both digital data computers. Because the registers are cumulative a failure is indicated when all three registers in both digital data computers are checked and data in any one of the registers is significantly higher than zero.		
(1) Using table 10, unit address 29 and table 7, memory inspect address for ref code XPWRIA and record data.		
(2) Using table 10, unit address 29 and table 7, memory inspect address for ref code XIFLCT and record data.		
(3) Using table 10, unit address 29 and table 7, memory inspect address for ref code XISCFC and record data.		
(4) Compare recorded data. Is data value of any of the ref codes significantly greater than zero?	d	e
c. Do the substeps below:		
(1) If ref code XPWRIA is significantly greater, replace left GCU (A1-F18AC-420-300, WP003 00) and do step g	-	-
(2) If ref code XIFLCT is significantly greater, replace digital data computer no. 1 (A1-F18AE-741-300, WP003 00) and do step g.	-	-
(3) If ref code XISCFC is significantly greater, do step f.	-	-
d. Fault isolate to defective avionic display and do step g.	-	-
e. Do substeps below:		
(1) If ref code XPWRIA is significantly greater, replace right GCU (A1-F18AC-420-300, WP008 00) and do step g.	-	-
(2) If ref code XIFLCT is significantly greater, replace digital data computer no. 2 (A1-F18AC-741-300, WP003 00) and do step g.	-	-

Table 9.   Intermittent Displays And All Displays Flashing STANDBY (Continued)

Procedure	No	Yes
(3) If ref code XISCFC is significantly greater, do step f.	-	-
f. Fault isolate to defective avionic component by doing substeps below:		
(1) Using avionic mux schematics locate and disconnect avionic components from mux one at a time.		
(2) Using applicable unit address and memory inspect address for ref code XIFLCT, memory inspect ref code and record data.		
(3) Repeat steps f1 and f2 until the memory inspect data readout display of XISCFC stops increasing in value. This indicates that the defective component has been disconnected from the avionic mux.		
(4) Replace the last disconnected component (defective component) per avionic mux schematic reference and do step g.	-	-
g. Do the steps below:		
(1) Reconnect any connectors that were disconnected during fault isolation.		
(2) Close any doors that were opened during fault isolation.	-	-

Table 10.   Unit Address 29 (MC2) MI Addresses

REF CODE	SOFTWARE CONFIGURATION (CONFIG/IDENT)					
	89A Address	92A Address	15C Address	12A Address	10A Address	
◻1▶ XPWRIA	000560	000561	00000163	000634	000561	
◻1▶ XIFLCT	000505	000505	00000144	000557	000505	
◻1▶ XISCFC	000506	000506	00000145	000560	000506	
LEGEND						
◻1▶ Intermittent MC Shutdown						
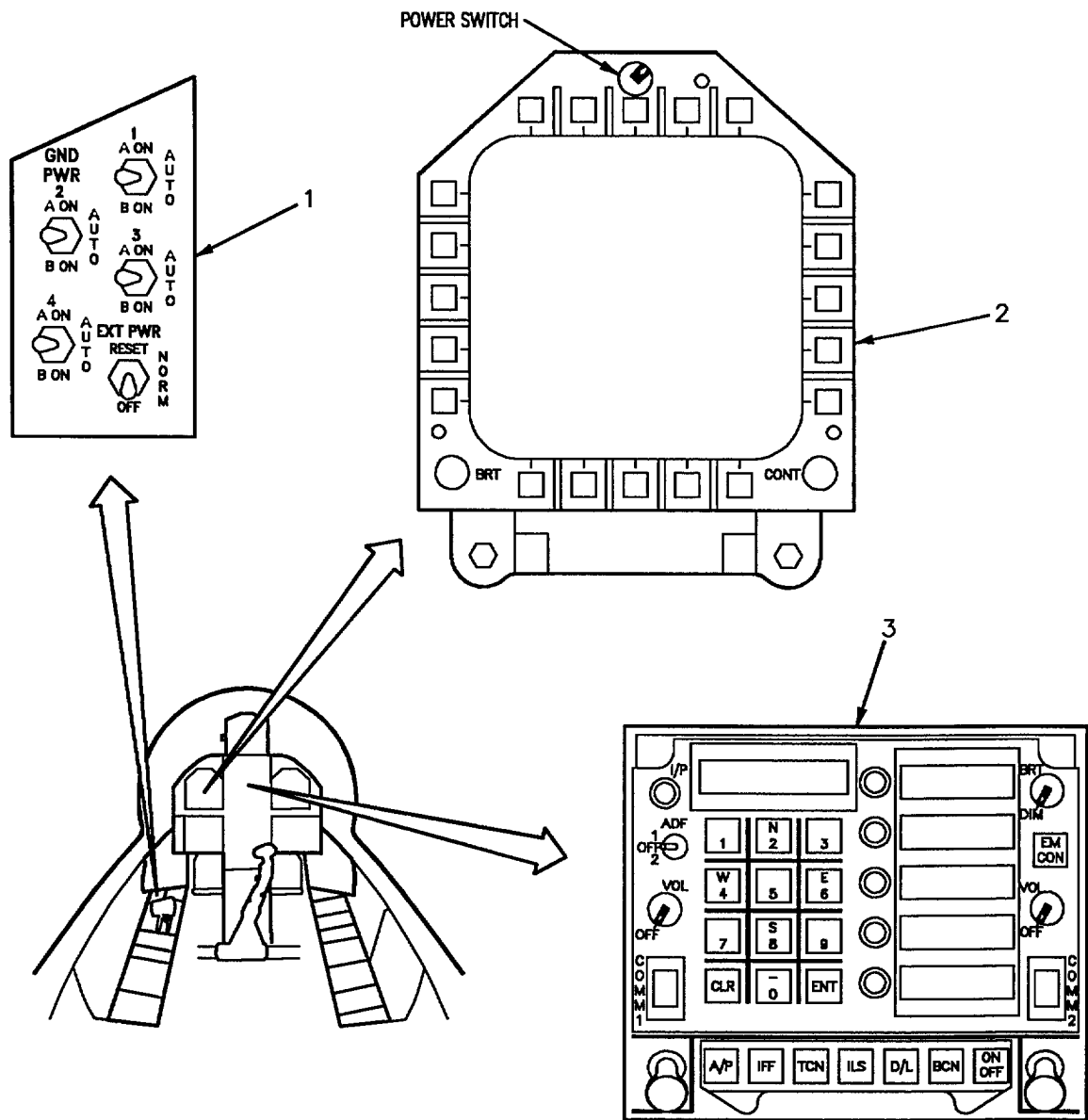
NOMENCLATURE	INDEX NO.	REF DES
GND PWR CONTROL PANEL ASSEMBLY	1	1A-H004
LEFT DIGITAL DISPLAY INDICATOR IP-1317( )	2	80A-H001
ELECTRONIC EQUIPMENT CONTROL C-10380/ASQ	3	79A-J006

008001

Figure 1.   Controls and Indicators

BIT PUSHBUTTON PRESSED, PROVIDES BIT CONTROL DISPLAY

POWER SWITCH

MENU DISPLAY

POWER SWITCH

MI PUSHBUTTON PRESSED, PROVIDES MEMORY INSPECT DATA ON BIT CONTROL DISPLAY AND UNIT AND ADDR OPTIONS ON ELECTRONIC EQUIPMENT CONTROL C-10380/ASQ

BIT CONTROL DISPLAY

00800201
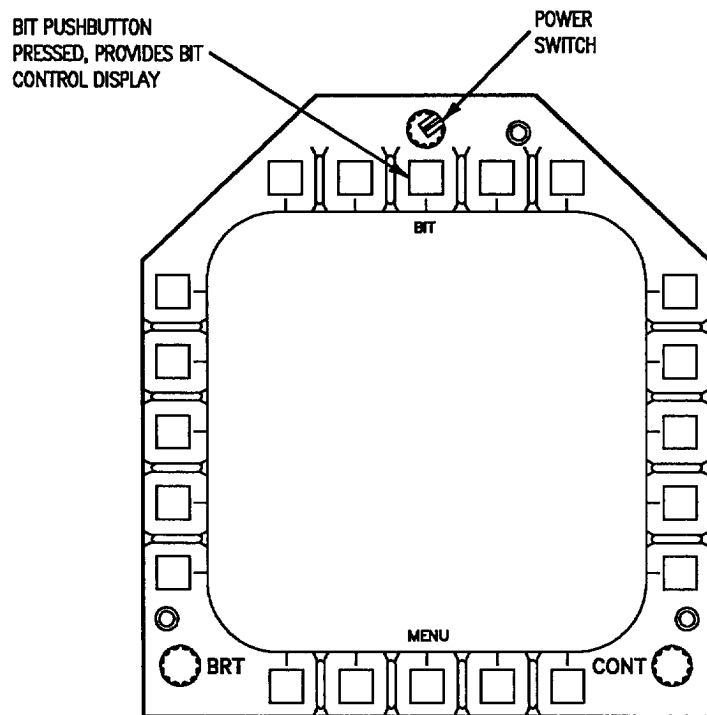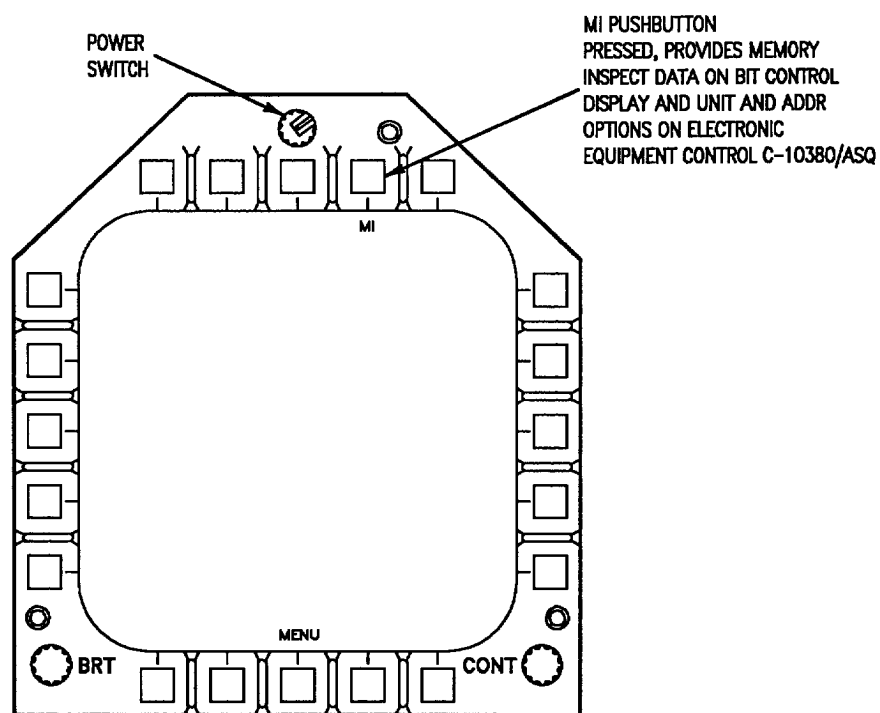
Figure 2.   Memory Inspect Displays (Sheet 1)
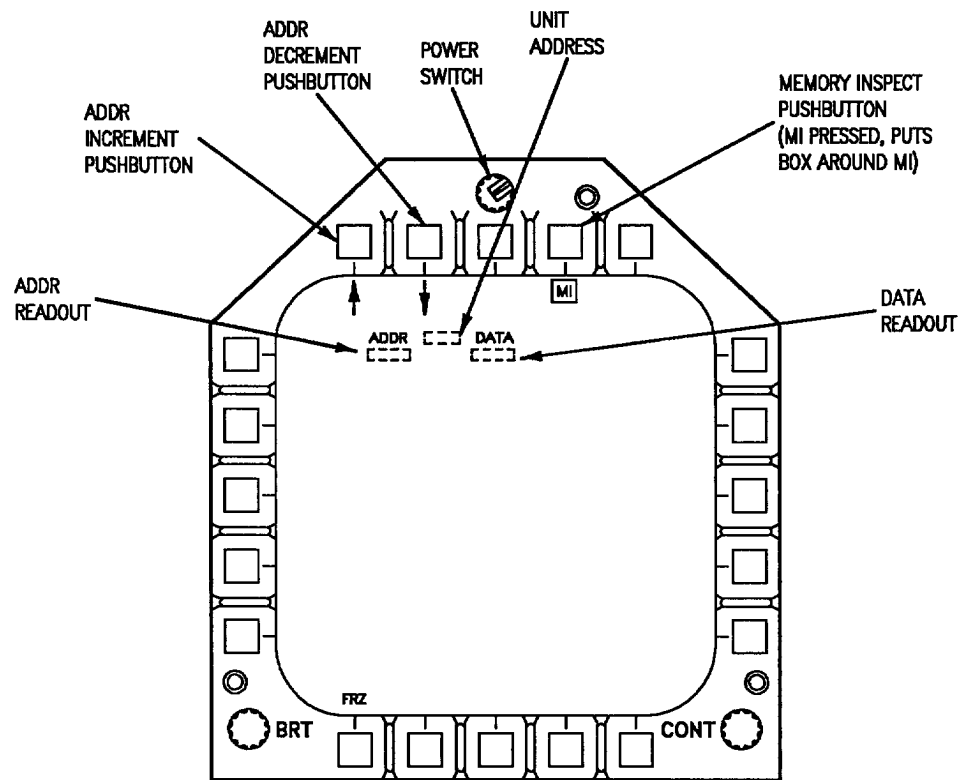
MEMORY INSPECT DISPLAY
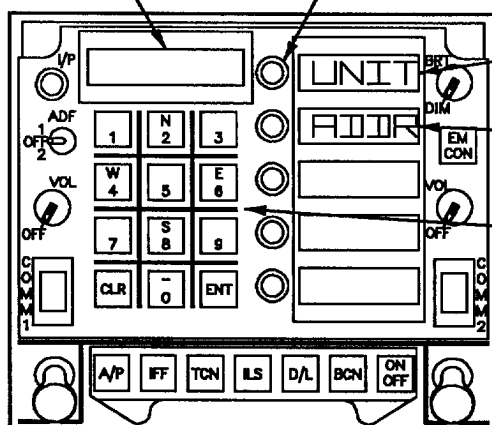
LEGEND

1. WHEN A SWITCH ON INDICATOR IS PRESSED, SWITCH NOMENCLATURE IS BOXED. PRESSING SWITCH AGAIN WILL DESELECT FUNCTION AND REMOVE BOX AROUND NOMENCLATURE.

2. ADDITIONAL DISPLAYS MAY APPEAR ON INDICATOR BUT ARE NOT USED IN THIS TEST.

00800202

Figure 2.   Memory Inspect Displays (Sheet 2)

Table 11. Maintenance Code 038 and/or 039 Exists

Support Equipment Required

**Part Number or
Type Designation**   **Nomenclature**

77/BN   Multimeter

Materials Required

None

NOTE

Control-Converter and Electronic Equipment Control Interconnect Schematics (A1-F18AC-741-500, WP007 00 or WP007 01) and Digital Data Computer No. 1 and No. 2 Interconnect Schematics (A1-F18AC-741-500, WP008 00 or WP008 01) may be used as an aid while doing this procedure.

For component locator, refer to WP006 00.

For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.

Malfunction is caused by one of the following:

Aircraft Wiring
Control Converter
Digital Data Computer No. 1
Digital Data Computer No. 2
Landing Gear Control Unit
No. 2 Relay Panel Assembly
12K-F015
12K-F014

Procedure	No	Yes
a. Do both maintenance codes 038 and 039 exist?	b	e
b. Does maintenance code 038 exist?	c	d
c. Do substeps below:		
(1) Open door 14R (A1-F18AC-LMM-010).		
(2) Disconnect 52P-F058C from no. 2 relay panel assembly.		
(3) Disconnect 83P-F002C from digital data computer no. 2.		
(4) Does continuity exist from:		
83P-F002C pin 121 to 52P-F058C pin 3 83P-F002C pin 127 to 52P-F058C pin 3?	u	q

Table 11.   Maintenance Code 038 and/or 039 Exists (Continued)

Procedure	No	Yes
d. Do substeps below:		
(1) Open door 13L (A1-F18AC-LMM-010).		
(2) Disconnect 83P-E001C from digital data computer no. 1.		
(3) Open door 14R (A1-F18AC-LMM-010).		
(4) Disconnect 52P-F058C from no. 2 relay panel assembly.		

(5)   Does continuity exist from:
 	
      83P-E001C pin 121 to 52P-F058C pin 3
      83P-E001C pin 127 to 52P-F058C pin 3? . . . .
	u	r

e. Do substeps below:		
(1) Apply electrical power (A1-F18AC-LMM-000).		
(2) Using table 8 and table 9, memory inspect unit address 28, ref code IKMD14.		

(3)   On right digital display indicator (RDDI), does DATA readout display any of the below (figure 2, detail D):
 	
      XXXXX2
      XXXXX3
      XXXXX6
      XXXXX7 . . . .
	f	k

f. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
WARNING To prevent injury to personnel, do not connect proximity switch control to aircraft with launch bar in the down position.		
(2) Connect proximity switch control (A1-F18AC-LMM-000).		
(3) Apply electrical power (A1-F18AC-LMM-000).		
(4) On proximity switch control, set RIGHT GEAR switch to WT ON WHEELS.		

Table 11.   Maintenance Code 038 and/or 039 Exists (Continued)

Procedure	No	Yes
(5) On RDDI, does DATA readout display any of the below (figure 2): XXXXX2 XXXXX3 XXXXX6 XXXXX7	g	k
g. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058E from no. 2 relay panel assembly.		
(3) On proximity switch control, set RIGHT GEAR switch to WT OFF WHEELS.		
(4) Apply electrical power (A1-F18AC-LMM-000).		
(5) Does 28VDC exist between 52P-F058E pin 80 and aircraft ground?	j	h
h. Do substeps below:		
(1) On proximity switch control, set RIGHT GEAR switch to WT ON WHEELS.		
(2) Does 28VDC exist between 52P-F058E pin 80 and aircraft ground?		
i. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Open door 14R (A1-F18AC-LMM-010).		
(3) Disconnect 83P-F002C from digital data computer no. 2.		
(4) Disconnect 52P-F058C from no. 2 relay panel assembly.		
(5) Does continuity exist between: 52P-F058C pin 3 and 83P-F002C pin 121 52P-F058C pin 3 and 83P-F002C pin 127 52P-F058C pin 4 and 83P-F002C pin 122 52P-F058C pin 4 and 83P-F002C pin 128?	u	w
j. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
☐ 1 ▶ (2) Do substeps below:		
(a) Open door 6 (A1-F18AC-LMM-010).		

A1-F18AC-741-200

Table 11.   Maintenance Code 038 and/or 039 Exists (Continued)

Procedure	No	Yes
(b) Disconnect 12P-A004A from landing gear control unit.		
(c) Does continuity exist between 52P-F058E pin 80 and 12P-A004A pin 111?	u	t
☐2▶ (3) Do substeps below:		
(a) Remove door 3L (A1-F18AC-LMM-010).		
(b) Disconnect 12P-E004A from landing gear control unit.		
(c) Does continuity exist between 52P-F058E pin 80 and 12P-E004A pin 111?	u	t
k. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Open door 13R (A1-F18AC-LMM-010).		
(3) Disconnect 82P-F001A from control-converter.		
(4) Apply electrical power (A1-F18AC-LMM-000).		
(5) Does continuity exist between 82P-F001A pin 126 and aircraft ground?	m	l
l. Do substeps below:		
(1) On proximity switch control, set RIGHT GEAR switch to WT OFF WHEELS.		
(2) Does continuity exist between 82P-F001A pin 126 and aircraft ground?	s	p
m. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058C from no. 2 relay panel assembly.		
(3) On proximity switch control, set RIGHT GEAR switch to WT ON WHEELS.		
(4) Apply electrical power (A1-F18AC-LMM-000).		
(5) Does 28VDC exist between 52P-F058C pin 71 and aircraft ground?	n	o
n. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
☐1▶ (2) Do substeps below:		
(a) Open door 6 (A1-F18AC-LMM-010).		

Table 11.   Maintenance Code 038 and/or 039 Exists (Continued)

Procedure	No	Yes
(b) Disconnect 12P-A004A from landing gear control unit.		
(c) Does continuity exist between 52P-F058C pin 71 and 12P-A004A pin 102?	u	o
2 ▶ (3) Do substeps below:		
(a) Remove door 3L (A1-F18AC-LMM-010).		
(b) Disconnect 12P-E004A from landing gear control unit.		
(c) Does continuity exist between 52P-F058C pin 71 and 12P-E004A pin 102?	u	o
o. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Does continuity exist between 52P-F058C pin 53 and 82P-F001A pin 126? . . .	u	v
p. Do substeps below:		
(1) Remove electrical power (A1-F18AC-LMM-000).		
(2) Disconnect 52P-F058C from no. 2 relay panel assembly.		
(3) On proximity switch control, set RIGHT GEAR switch to WT OFF WHEELS.		
(4) Apply electrical power (A1-F18AC-LMM-000).		
(5) Does 28VDC exist between 52P-F058C pin 71 and aircraft ground?	o	t
q. Replace Digital Data Computer No. 2 (A1-F18AC-741-300, WP004 00) and do step x.	-	-
r. Replace Digital Data Computer No. 1 (A1-F18AC-741-300, WP003 00) and do step x.	-	-
s. Replace Control-Converter (A1-F18AC-741-300, WP005 00) and do step x.	-	-
t. Replace Landing Gear Control Unit (A1-F18AC-130-300, WP003 00) and do step x.	-	-
u. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step x.	-	-
v. Isolate between relay 12K-F015 and no. 2 relay panel assembly (A1-F18AC-420-300, WP032 00) and do step x.	-	-
w. Isolate between relay 12K-F014 and no. 2 relay panel assembly (A1-F18AC-420-300, WP032 00) and do step x.	-	-

Table 11.   Maintenance Code 038 and/or 039 Exists (Continued)

Procedure	No	Yes
x. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 83P-F002C		
(2) 83P-E001C		
(3) 82P-17001A		
(4) 52P-F058C		
(5) 52P-F058E		
(6) 12P-A004A		
(7) 12P-E004A		
(8) Door 14R		
(9) Door 13L		
(10) Door 13R		
(11) Door 10R		
(12) Door 6		
(13) Door 3L		

LEGEND

1 ▶   On F/A-18A 162394 thru 163175 after F/A-18 AFC 253.

2 ▶   On F/A-18A 162394 thru 163175 after F/A-18 AFC 292.

Table 12.   MC CONFIG Caution and Maintenance Code 424 Exists

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

Table 12.   MC CONFIG Caution and Maintenance Code 424 Exists (Continued)

NOTE

Digital Data Computer No. 1 and No. 2 Cautions, Advisory and Maintenance Codes Schematic (A1-F18AC-741-500, WP013 00 or WP013 01) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.

Malfunction is caused by one of the items below:

Aircraft Wiring
Digital Data Computer No. 1
Digital Data Computer No. 2

Procedure	No	Yes

NOTE

The question used in logic tree, "Does continuity exist", means to test for the items listed below:

1. Pin to pin test per procedural step.
2. Shorts to ground.
3. Shorts between surrounding pins on connectors.
4. Shorts between shield and conductors.
5. Shield continuity.

a. Do substeps below:

  (1)   Using table 7 and table 8 memory inspect unit address 28, ref code I1DPC1.

  (2)   On RDDI, does DATA readout display (figure 2):

     X--XXX . . . .   b | f

b. Do substeps below:

  (1)   On RDDI, set power switch to OFF.

  (2)   Remove electrical power (A1-F18AC-LMM-000).

  (3)   Open door 13L (A1-F18AC-LMM-010).

  (4)   Disconnect 83P-E001K from digital data computer no. 1.

Table 12.   MC CONFIG Caution and Maintenance Code 424 Exists (Continued)

Procedure	No	Yes
(5) Does continuity exist from: 83P-E001K pin 25 to aircraft ground 83P-E001K pin 26 to aircraft ground 83P-E001K pin 27 to aircraft ground 83P-E001K pin 28 to aircraft ground 83P-E001K pin 29 to aircraft ground 83P-E001K pin 30 to aircraft ground 83P-E001K pin 31 to aircraft ground 83P-E001K pin 32 to aircraft ground?	c	d
c. Does continuity exist from: 83P-E001K pin 21 to pin 24 83P-E001K pin 22 to pin 23?	d	e
d. Repair defective aircraft wiring (A1-F18A( )-WRM-000) and do step i.	-	-
e. Replace Digital Data Computer No. 1 (A1-F18AC-741-300, WP003 00) and do step i.	-	-
f. Do substeps below: (1) On RDDI, set power switch to OFF. (2) Remove electrical power (A1-F18AC-LMM-000). (3) Open door 14R (A1-F18AC-LMM-010). (4) Disconnect 83P-F002K from digital data computer no. 2. (5) Does continuity exist from: 83P-E002K pin 25 to aircraft ground 83P-E002K pin 26 to aircraft ground 83P-E002K pin 27 to aircraft ground 83P-E002K pin 28 to aircraft ground 83P-E002K pin 29 to aircraft ground 83P-E002K pin 30 to aircraft ground 83P-E002K pin 31 to aircraft ground 83P-E002K pin 32 to aircraft ground?	g	d
g. Does continuity exist from: 83P-E002K pin 21 to pin 24 83P-E002K pin 22 to pin 23?	d	h
h. Replace Digital Data Computer No. 2 (A1-F18AC-741-300, WP004 00) and do step i.	-	-

Table 12. MC CONFIG Caution and Maintenance Code 424 Exists (Continued)

Procedure	No	Yes
i. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 83P-E001K		
(2) 83P-F002K		
(3) Door 14R		
(4) Door 13L	-	-

Table 13. Maintenance Code 415 and/or Code 416 Exists

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

Digital Data Computer No. 1 and No. 2 Interconnect Schematic (A1-F18AC-741-500, WP008 00 or WP 008 01) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

For F/A-18A 162375 thru 163175 after F/A-18 AFC 253 or AFC 292, all MMP codes must be read in cockpit DDI.

Malfunction is caused by one of the items below:

Aircraft Wiring
Digital Data Computer No. 1
Digital Data Computer No. 2

Procedure	No	Yes
a. Does maintenance code 415 exist?	f	b

Table 13.   Maintenance Code 415 and/or Code 416 Exists (Continued)

Procedure	No	Yes
b. Do substeps below:		
(1) On RDDI, set power switch to OFF.		
(2) Remove electrical power (A1-F18AC-LMM-000).		
(3) Open door 13L (A1-F18AC-LMM-010).		
(4) Disconnect 83P-E001K from digital data computer no. 1.		
(5) Does continuity exist from:		
83P-E001K pin 15 to aircraft ground 83P-E001K pin 16 to aircraft ground?	d	e
c. Repair defective aircraft wiring (A1-F18A( )-WRM-000) and do step j.	-	-
d. Replace Digital Data Computer No. 1 (A1-F18AC-741-300, WP003 00) and do step j.	-	-
e. Do substeps below:		
(1) On RDDI, set power switch to OFF.		
(2) Remove electrical power (A1-F18AC-LMM-000).		
(3) Open door 14R (A1-F18AC-LMM-010).		
(4) Disconnect 83P-F002K from digital data computer no. 2.		
(5) Does continuity exist from:		
83P-E002K pin 15 to aircraft ground 83P-E002K pin 16 to aircraft ground?	f	g
f. Repair defective aircraft wiring (A1-F18A( )-WRM-000) and do step j.	-	-
g. Replace Digital Data Computer No. 2 (A1-F18AC-741-300, WP004 00) and do step j.	-	-
h. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 83P-E001K		
(2) 83P-F002K		
(3) Door 14R		
(4) Door 13L	-	-

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 1

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Subject	Page No.

Record of Applicable Technical Directives

None

Table 1. Multiple Avionic Mux Bus Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

Table 1.   Multiple Avionic Mux Bus Fail Troubleshooting (Continued)

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 1X high and 1X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 1X Schematic (A1-F18AC-741-500, WP004 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		
(2) On RDDI, does DATA readout display any of the follwing:		
X2XXXX X6XXXX?	c	b
b. Repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
WTF002 pin 110 to 84P-F002F pin S003 WTF002 pin 109 to 84P-F002F pin S002	-	-
c. Repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
WTF004 pin 4 to WTF006 pin 147 WTF004 pin 6 to WTF006 pin 148	-	-

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 2

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Subject	Page No.

Record of Applicable Technical Directives

None

Table 1.   Multiple Avionic Mux Bus Fail Troubleshooting

Support Equipment Required	
Part Number or Type Designation	**Nomenclature**
77/BN	Multimeter
Materials Required	
None	

Table 1.   Multiple Avionic Mux Bus Fail Troubleshooting (Continued)

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 1X high and 1X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 1X Schematic (A1-F18AC-741-500, WP004 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		
(2) On RDDI, does DATA readout display any of the below: X2XXXX X6XXXX?	c	b
b. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from: WTF001 pin 260 to 84P-F002F pin S002 WTF001 pin 260 to 84P-F002F pin S003	-	-
c. Repair defective aircraft wiring (A1-F18A( )-WDM-000) from: WTF005 pin 36 to WTF006 pin 147 WTF005 pin 37 to WTF006 pin 148	-	-

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 3

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	—	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	—
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Multiple Avionic Mux Bus Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Table 1. Multiple Avionic Mux Bus Fail Troubleshooting (Continued)

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 1X high and 1X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 1X Schematic (A1-F18AC-741-500, WP004 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		
(2) On RDDI, does DATA readout display any of the following:		
X2XXXX X6XXXX?	e	b
b. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 6 (A1-F18AC-LMM-010).		
(3) Disconnect 52P-A034 from bulkhead (door 6).		
(4) Remove internal door, NWA (A1-F18AC-LMM-010).		
(5) Disconnect:		
1 ▶ 52P-D038 from bulkhead.		
2 ▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000),		
83P-H023B from bulkhead.		
(6) Remove left Digital Display Indicator (LDDI) (A1-F18AC-745-300, WP004 00).		

Table 1.   Multiple Avionic Mux Bus Fail Troubleshooting (Continued)

Procedure	No	Yes
(7) Using time domain reflectometer and A1-F18A( )-WRM-000, test wiring from:		
⬜1 ▶ 52J-J042 pin 31 to 80P-H001A pin 41 52J-J042 pin 30 to 80P-H001A pin 40		
⬜2 ▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000),		
52J-J038 pin 63 to 83J-H023 pin 36 52J-J038 pin 65 to 83J-H023 pin 37		
Does wiring test good?	c	d
c. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step h.	-	-
d. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
52P-D038 pin 65 to WTF001 pin 260 52P-D038 pin 63 to WTF001 pin 262		
and do step h.	-	-
e. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 6 (A1-F18AC-LMM-010).		
(3) Disconnect 52P-A034 from bulkhead (door 6).		
(4) Remove internal door, NWA (A1-F18AC-LMM-010).		
(5) Disconnect 52P-D038 from bulkhead.		
(6) Remove left Digital Display Indicator (LDDI) (A1-F18AC-745-300, WP004 00).		
(7) Using time domain reflectometer and A1-F18A( )-WRM-000, test wiring from:		
⬜1 ▶ 52J-J042 pin 32 to 80P-H001A pin 67 52J-J042 pin 33 to 80P-H001A pin 68		
⬜2 ▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000),		
52J-J038 pin 52 to 83J-H023 pin 41 52J-J038 pin 53 to 83J-H023 pin 40		
Does wiring test good?	f	g
f. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step h.	-	-

Table 1. Multiple Avionic Mux Bus Fail Troubleshooting (Continued)

Procedure	No	Yes

g. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
    52P-D038 pin 52 to WTF001 pin 263
    52P-D038 pin 53 to WTF001 pin 265
 	
 and do step h. . . . .
	-	-

h. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:
 	
  (1) 52P-A034
 	
  (2) 52P-D038
 	
  (3) Door 6
 	
  (4) Internal door NWA
 	
  (5) Left Digital Display Indicator . . . .
	-	-

LEGEND		
1 On F/A-18A before F/A-18 AFC 253 or F/A-18 AFC 292 and F/A-18B. 2 On F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.		

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 4

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Subject   **Page No.**

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	—	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	—
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1. Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Table 1. Multiple Terminal Fail Troubleshooting (Continued)

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 1X high and 1X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 1X Schematic (A1-F18AC-741-500, WP004 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		
(2) On RDDI, does DATA readout display any of the following:		
X2XXXX X6XXXX?	e	b
b. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 6 (A1-F18AC-LMM-010).		
(3) Disconnect 52P-A034 from bulkhead (door 6).		
(4) Remove internal door, NWA (A1-F18AC-LMM-010).		
(5) Disconnect:		
[1]▶ 52P-D038 from bulkhead.		
[2]▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000), 83P-H023B from bulkhead.		
(6) Remove left Digital Display Indicator (LDDI) (A1-F18AC-745-300, WP004 00).		

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
(7) Using time domain reflectometer and A1-F18A( )-WRM-000, test wiring from:		
☐1 ▶ 52J-H034 pin 108 to 80P-H001A pin 41 52J-H034 pin 109 to 80P-H001A pin 40		
☐2 ▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000),		
83J-H023 pin 39 to 52J-H034 pin 109 83J-H023 pin 38 to 52J-H034 pin 108		
Does wiring test good?	c	d
c. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step h.	-	-
d. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
52P-A034 pin 108 to 83P-E001D pin 6 52P-A034 pin 109 to 83P-E001D pin 5		
and do step h.	-	-
e. Do substeps below:		
(1) Turn off electrical power (A1-F18AC-LMM-000).		
(2) Open door 6 (A1-F18AC-LMM-010).		
(3) Disconnect 52P-A034 from bulkhead (door 6).		
(4) Remove internal door, NWA (A1-F18AC-LMM-010).		
(5) Remove left Digital Display Indicator (LDDI) (A1-F18AC-745-300, WP004 00).		
(6) Using time domain reflectometer and A1-F18A( )-WRM-000, test wiring from:		
☐1 ▶ 52J-H034 pin 96 to 80P-H001A pin 67 52J-H034 pin 84 to 80P-H001A pin 68		
☐2 ▶ WITH DIGITAL DATA COMPUTER CONFIG/IDENT 15C AND UP (A1-F18AC-SCM-000),		
83J-H023 pin 52 to 52J-H034 pin 96 83J-H023 pin 51 to 52J-H034 pin 84		
Does wiring test good?	f	g
f. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) and do step h.	-	-

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
g. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from: 52P-A034 pin 96 to 83P-E001E pin 5 52P-A034 pin 84 to 83P-E001E pin 6 and do step h.	-	-
h. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed: (1) 52P-A034 (2) Door 6 (3) Internal door NWA (4) Left Digital Display Indicator	-	-
LEGEND		
☐1▶ On F/A-18A before F/A-18 AFC 253 or F/A-18 AFC 292 and F/A-18B. ☐2▶ On F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.		

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 5

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

None

Table 1.   Multiple Terminal Fail Troubleshooting

| Support Equipment Required	
Part Number or Type Designation	**Nomenclature**
77/BN	Multimeter
Materials Required	
None	

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

	No	Yes
NOTE		
Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.		
Avionic Mux Bus 2X Schematic and Avionic Mux Bus 2Y Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.		
For component locator, refer to WP006 00.		
Memory inspect data in this procedure is provided in WP008 00.		
Malfunction is caused by aircraft wiring.		

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		
(2) On RDDI, does DATA readout display any of the following:		
X2XXXX X6XXXX?	c	b
b. Repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
61J-P110B pin S001 to 61J-R111A pin S002 61J-P110B pin S002 to 61J-R111A pin S001	-	-
c. Repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
61J-P110B pin S003 to 61J-R111A pin S003 61J-P110B pin S004 to 61J-R111A pin S004	-	-

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ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 6

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	-	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	-
F/A-18 AFC 292	-	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	-
F/A-18 AFC 225	-	Five (5) Avionics Multiplex Bus Upgrade, Incorporation of (ECP MDA-F/A-18 0529)	15 Jan 03	-
F/A-18 AFC 231	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-
F/A-18 AFC 231 Part 2 or Part 3	-	Embedded Global Positioning System (GPS)/Inertial Navigation System (INS) (EGI), Incorporation of (ECP MDA-F/A-18 0521)	15 Jan 03	-

Table 1. Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2X Schematic and Avionic Mux Bus 2Y Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes

a. Do substeps below:
 	
  (1)   Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).
 	
  (2)   On RDDI, does DATA readout display any of the below:
 	
    X2XXXX
    X6XXXX? . . . .
	b	e

b. Do substeps below:
 	
  (1)   Open door 35L (A1-F18AC-LMM-010).
 	
  (2)   Disconnect 52P-E007 from bulkhead.
 	
  (3)   Open door 3 (A1-F18AC-LMM-010).
 	
  (4)   Disconnect radar disconnect 05P02 from bulkhead.
 	
  (5) Open door 13L (A1-F18AC-LMM-010).		

Table 1. Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
(6) Disconnect as follows:		
3 ▶ (a) 162394 thru 163175 before F/A–18 AFC 231, disconnect 68P–E001A from Inertial Navigation Unit.		
3 ▶ (b) 162394 thru 163175 before F/A–18 AFC 231 Part 2 or Part 3, disconnect 68P–E001A from Inertial Navigation Unit.		
4 ▶ (c) 162394 thru 163175 after F/A–18 AFC 231, disconnect 68P–E011C from Embedded GPS/INS (EGI) receiver.		
4 ▶ (d) 162394 thru 163175 after F/A–18 AFC 231 Part 2 or Part 3, disconnect 68P–E011C from Embedded GPS/INS (EGI) receiver.		
(7) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
52J-E007 pin 110 to 60J-A001B pin 92 52J-E007 pin 111 to 60J-A001B pin 91		
Does wiring test good?	d	c
c. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
52P-E007 pin 110 to 61J-P110B pin S004 52P-E007 pin 111 to 61J-P110B pin S003		
and do step h	-	-
d. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
52J-E007 pin 110 to WTE001 pin 143 52J-E007 pin 111 to WTE001 pin 142		
and do step h	-	-
e. Do substeps below:		
(1) Open door 10R (A1-F18AC-LMM-010).		
(2) Disconnect 52P-D029 from bulkhead.		
(3) Open door 35L (A1-F18AC-LMM-010).		
(4) Disconnect 52P-E007 from bulkhead.		
(5) Open door 13R (A1-F18AC-LMM-010).		
1 ▶ Disconnect 76P-F002E from Receiver-Transmitter RT-1250( )/ARC No. 2.		
2 ▶ Disconnect 76P-F042E from bulkhead.		

Table 1. Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
(6) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from: 52J-E007 pin 69 to 52P-D029 pin 57 52J-E007 pin 80 to 52P-D029 pin 69 Does wiring test good?	f	g
f. Isolate defective aircraft wiring (A1-F18A( )-WDM-000) from: 52J-E007 pin 69 to 52P-D029 pin 57 52J-E007 pin 80 to 52P-D029 pin 69 and do step h	-	-
g. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from: 61J-P110B pin S001 to 52P-E007 pin 80 61J-P110B pin S002 to 52P-E007 pin 69 and do step h	-	-
h. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed or closed: (1) 05P02 (2) 5W1P2 (3) 52P-F003 (4) 52P-E007 (5) 52P-D029 ⟦3⟧ (6) 68P-E001A ⟦4⟧ (7) 68P-E011C ⟦1⟧ (8) 76P-F002E ⟦2⟧ (9) 76P-F042E (10) Door 3 (11) Door 10R (12) Door 13L (13) Door 13R (14) Door 33		

Table 1. Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
(15) Door 35L		
(16) Controller-Processor C-10661/AAS-38		
(17) Mounting Adapter MT-6082/ASQ-173 access door 2		
(18) Mounting Adapter MT-6512/AAR-50 access door 2	-	-
LEGEND		
▭1▷ On F/A-18A before F/A-18 AFC 253 or F/A-18 AFC 292 and F/A-18B.		
▭2▷ On F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.		
▭3▷ On F/A-18A/B before F/A-18 AFC 231; also on F/A-18A before F/A-18 AFC 231 Part 2 or Part 3.		
▭4▷ On F/A-18A/B after F/A-18 AFC 231; also on F/A-18A after F/A-18 AFC 231 Part 2 or Part 3.		

Table 2. Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)
U507AB	52J-E007 pin 111 to 60J-A001B pin 91	68	PTFE	309 ▭1▷ 302 ▭2▷
U508AB	52J-E007 pin 110 to 60J-A001B pin 92	68	PTFE	309 ▭1▷ 302 ▭2▷
U505Y	52J-E007 pin 69 to 52P-D029 pin 57	68	PTFE	210 ▭1▷ 212 ▭2▷
U506Y	52J-E007 pin 80 to 52P-D029 pin 69	68	PTFE	210 ▭1▷ 212 ▭2▷
U505AB	61J-P110B pin 20 to 52P-E007 pin 69	68	PTFE	145
U506AB	61J-P110B pin 21 to 52P-E007 pin 80	68	PTFE	145
LEGEND				
▭1▷ F/A-18A.				
▭2▷ F/A-18B.				

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 7

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 253	—	US Naval Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0560R1)	1 Jan 01	—
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

<table>
<tr><td colspan="3" align="center">**Materials Required**</td></tr>
<tr><td colspan="3" align="center">None</td></tr>
<tr><td colspan="3" align="center">**NOTE**</td></tr>
<tr><td colspan="3">Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2X Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.</td></tr>
<tr><td colspan="3">Malfunction is caused by aircraft wiring.</td></tr>
<tr><td>**Procedure**</td><td>**No**</td><td>**Yes**</td></tr>
<tr><td>

a.   Do substeps below:

   (1)   Open door 10R (A1-F18AC-LMM-010).

   (2)   Disconnect 52P-D029 from bulkhead.

   (3)   Open door 35L (A1-F18AC-LMM-010).

   (4)   Disconnect 52P-E007 from bulkhead.

   (5)   Open door 13R (A1-F18AC-LMM-010).

   1▶   Disconnect 76P-F002E from Receiver-Transmitter RT-1250( )/ARC No. 2.

   2▶   Disconnect 76P-F042E from bulkhead.

   (6)   Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:

      52J-E007 pin 69 to 52P-D029 pin 57
      52J-E007 pin 80 to 52P-D029 pin 69

     Does wiring test good? . . . .</td><td>

b</td><td>

c</td></tr>
</table>

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes

b.   Isolate defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
      52J-E007 pin 69 to 52P-D029 pin 57
      52J-E007 pin 80 to 52P-D029 pin 69
 	
    and do step d. . . . .
	-	-

c.   Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:
 	
 ▢1▶ 52J-J029 pin 57 to 77P-L001E pin S007
      52J-J029 pin 69 to 77P-L001E pin S008
 	
 ▢2▶ 52J-J029 pin 57 to 76P-F042E pin S002
      52J-J029 pin 69 to 76P-F042E pin S003
 	
    and do step d. . . . .
	-	-

d.   If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:
 	
      (1)   52P-D029
 	
      (2)   52P-E007
 	
      (3)   Door 10R
 	
      (4)   Door 13R
 	
      (5)   Door 35L
 	
 ▢1▶ (6)   76P-F002E
 	
 ▢2▶ (7)   76P-F042E
	-	-

LEGEND
▢1▶   On F/A-18A before F/A-18 AFC 253 or F/A-18 AFC 292 and F/A-18B.
▢2▶   On F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.

A1-F18AC-741-200   015 00 Page 4

Table 2. Avionic Mux Cable Parameters

Cable Number	Connector	Impedance (Ohms)	Dielectric Type	Cable Length (Inches)
U505Y	52J-E007 pin 69 to 52P-D029 pin 57	68	PTFE	210 [1] 460 [3] / 212 [2]
U506Y	52J-E007 pin 80 to 52P-D029 pin 69	68	PTFE	210 [1] 460 [3] / 212 [2]

LEGEND

[1] F/A-18A before F/A-18 AFC 253 or F/A-18 AFC 292.
[2] F/A-18B.
[3] F/A-18A 162394 thru 163175 after F/A-18 AFC 253 or F/A-18 AFC 292.

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 8

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Multiple Terminal Fail Troubleshooting

Support Equipment Required	
Part Number or Type Designation	**Nomenclature**
77/BN	Multimeter

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2X Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Cable Assembly

Procedure	No	Yes
a. Do substeps below:		
(1) Open door 3 (A1-F18AC-LMM-010).		
(2) Disconnect radar disconnect 05P02 from bulkhead.		
(3) Open radome (A1-F18AC-LMM-000).		
⃞1▶ (4) Disconnect 07P06 from Computer-Power Supply CP-1325/APG-65.		
⃞2▶ (5) Disconnect 04P05 from Radar Data Processor CP-2062/APG-73.		
(6) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
⃞1▶ 05P02 pin 88 to 07P06 pin 52 05P02 pin 89 to 07P06 pin 53		
⃞2▶ 05P02 pin 88 to 04P05 pin 16 05P02 pin 89 to 04P05 pin 37		
Does wiring test good?	b	c
b. Replace pantograph assembly (A1-F18AC-742-300, WP013 00), and do step f.	-	-

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
c. Do substeps below:		
(1) Open door 6 (A1-F18AC-LMM-010).		
(2) Disconnect 52P-A046 from bulkhead (door 6).		
(3) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
60J-A001B pin 89 to 52P-A046 pin 63 60J-A001B pin 88 to 52P-A046 pin 65		
Does wiring test good?	d	e
d. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
60J-A001B pin 88 to 52P-A046 pin 65 60J-A001B pin 89 to 52P-A046 pin 63		
and do step f.	-	-
e. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
☐1▶ 52J-H046 pin 63 to 77P-L001E pin S003 52J-H046 pin 65 to 77P-L001E pin S002		
☐2▶ 52J-H046 pin 63 to 80P-L025D pin S004 52J-H046 pin 65 to 80P-L025D pin S003		
and do step f.	-	-
f. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 04P05		
(2) 05P02		
(3) 07P06		
(4) 52P-A046		
(5) Door 3		
(6) Door 6		
(7) Radome	-	-

LEGEND

☐1▶ On F/A-18A before F/A-18 AFC 292 and F/A-18B.

☐2▶ On F/A-18A 162394 thru 163175 after F/A-18 AFC 292.

Table 2.   Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)		
—	⬛3⬛ 05P02 pin 88 to 07P06 pin 52	68	PTFE	93		
—	⬛3⬛ 05P02 pin 89 to 07P06 pin 53	68	PTFE	93		
—	⬛4⬛ 05P02 pin 89 to 04P05 pin 16	68	PTFE	93		
—	⬛4⬛ 05P02 pin 89 to 04P05 pin 37	68	PTFE	93		
U505H	60J-A001B pin 88 to 52P-A046 pin 65	68	PTFE	149 ◀1		
				151 ◀2		
U506H	60J-A001B pin 89 to 52P-A046 pin 63	68	PTFE	149 ◀1		
				151 ◀2		

LEGEND

⬛1⬛   F/A-18A.

⬛2⬛   F/A-18B.

⬛3⬛   F/A-18A before F/A-18 AFC 292 and F/A-18B.

⬛4⬛   F/A-18A 162394 thru 163175 after F/A-18 AFC 292.

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 9

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1. Multiple Terminal Fail Troubleshooting

Support Equipment Required	
Part Number or Type Designation	**Nomenclature**
77/BN	Multimeter

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2X Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Cable Assembly

Procedure	No	Yes
a. Do substeps below:		
(1) Open door 3 (A1-F18AC-LMM-010).		
(2) Disconnect radar disconnect 05P02 from bulkhead.		
(3) Open radome (A1-F18AC-LMM-000).		
1 (4) Disconnect 07P06 from Computer-Power Supply CP-1325/APG-65.		
2 Disconnect 04P05 from Radar Data Processor CP-2062/APG-73.		
(5) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
1 05P02 pin 46 to 07P06 pin 52 05P02 pin 56 to 07P06 pin 53		
2 05P02 pin 46 to 04P05 pin 16 05P02 pin 56 to 04P05 pin 37		
Does wiring test good?	b	c
b. Replace pantograph assembly (A1-F18AC-742-300, WP013 00), and do step d.	-	-

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes

c.   Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
   60J-A001B pin 46 to WTE001 pin 139
   60J-A001B pin 56 to WTE001 pin 140
 	
   and do step d. . . . .
	-	-

d.   If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:
 	
   (1)   05P02
 	
   (2)   07P06
 	
   (3)   Door 3
 	
   (4)   Radome
	-	-

LEGEND

1 ▶   F/A-18A before F/A-18 AFC 292 and F/A-18B.

2 ▶   F/A-18A 162394 thru 163175 after F/A-18 AFC 292.

Table 2.   Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)
—	1 ▶ 05P02 pin 88 to 07P06 pin 52	68	PTFE	93
—	1 ▶ 05P02 pin 89 to 07P06 pin 53	68	PTFE	93
—	2 ▶ 05P02 pin 89 to 04P05 pin 16	68	PTFE	93
—	2 ▶ 05P02 pin 89 to 04P05 pin 37	68	PTFE	93

LEGEND

1 ▶   F/A-18A before F/A-18 AFC 292 and F/A-18B.

2 ▶   F/A-18A 162394 thru 163175 after F/A-18 AFC 292.

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 10

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

None

Table 1.   Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Materials Required

None

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

NOTE			

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2Y Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Memory inspect data in this procedure is provided in WP008 00.

Malfunction is caused by aircraft wiring.

Procedure	No	Yes
a. Do substeps below:		
(1) Using unit address 28, memory inspect address for ref code BDMUX1 (table 8, WP008 00).		

(2)   On RDDI, does DATA readout display any of the below:
 	
       X2XXXX
       X6XXXX? . . . .
	c	b

b. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
     WTE001 pin 139 to 62P-E006B pin S006
     WTE001 pin 140 to 62P-E006B pin S007
 	
  and do step d. . . . .
	-	-

c. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
     83P-E001E pin 23 to WTF001 pin 266
     83P-E001E pin 24 to WTF001 pin 268
 	
  and do step d. . . . .
	-	-

d. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 52P-D029		
(2) 83P-E001E		
(3) 83P-E005		
(4) Door 10R		
(5) Door 13L .	-	-

Table 2.   Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)
U507A	83P-E001E pin 23 to 52P-J029 pin 91	68	PTFE	217 ◀ 1 ▶ 216 ◀ 2 ▶
U508A	83P-E001E pin 24 to 52P-J029 pin 102	68	PTFE	217 ◀ 1 ▶ 216 ◀ 2 ▶
LEGEND				

◀ 1 ▶   F/A-18A.

◀ 2 ▶   F/A-18B.

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 11

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Materials Required

None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2Y Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Cable Assembly

Procedure	No	Yes
a. Do substeps below:		
(1) Open door 3 (A1-F18AC-LMM-010).		
(2) Disconnect radar disconnect 05P02 from bulkhead.		
(3) Open radome (A1-F18AC-LMM-000).		
☐1▸ (4) Disconnect 07P06 from Computer-Power Supply CP-1325/APG-65.		
☐2▸ Disconnect 04P05 from Radar Data Processor CP-2062/APG-73.		
(5) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
☐1▸ 05P02 pin 91 to 07P06 pin 68 05P02 pin 92 to 07P06 pin 69		
☐2▸ 05P02 pin 91 to 04P05 pin 3 05P02 pin 92 to 04P05 pin 2		
Does wiring test good?	b	c
b. Replace pantograph assembly (A1-F18AC-742-300, WP013 00), and do step d.	-	-

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes

c.   Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:
 	
   60J-A001B pin 91 to WTE001 pin 142
   60J-A001B pin 92 to WTE001 pin 143
 	
   and do step d. . . . .
	-	-

d.   If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:
 	
   (1)   04P05
 	
   (2)   05P02
 	
   (3)   07P06
 	
   (4)   Door 3
 	
   (5)   Radome
	-	-

LEGEND

`1▶`   F/A-18A before AFC 292 and F/A-18B.

`2▶`   F/A-18A 162394 thru 163175 after F/A-18A AFC 292.

Table 2.   Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)
—	`1▶` 05P02 pin 91 to 07P06 pin 68	68	PTFE	93
—	`1▶` 05P02 pin 92 to 07P06 pin 69	68	PTFE	93
—	`2▶` 05P02 pin 91 to 04P05 pin 3	68	PTFE	93
—	`2▶` 05P02 pin 92 to 04P05 pin 2	68	PTFE	93

LEGEND

`1▶`   F-18A before F/A-18 AFC 292 and F/A-18B.

`2▶`   F-18/A 162394 thru 163175 after F/A-18 AFC 292.

ORGANIZATIONAL MAINTENANCE

TESTING AND TROUBLESHOOTING

TROUBLESHOOTING PROCEDURE - PART 12

MISSION COMPUTER SYSTEM

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/Number	Date	Title and ECP No.	Date Incorp.	Remarks
F/A-18 AFC 292	—	US Marine Corps Reserves A+ Avionics Upgrade; Incorporation of (ECP MDA-F/A-18-0583)	1 Jan 01	—

Table 1.   Multiple Terminal Fail Troubleshooting

Support Equipment Required

Part Number or Type Designation	Nomenclature
77/BN	Multimeter

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Materials Required
None

NOTE

Terminal fail codes indicate two malfunctions exist. Malfunctions on both avionic mux bus wires must exist for a terminal fail code to exist. (Example: Avionic mux bus 2X high and 2X low must be open to indicate a terminal fail). Troubleshooting procedures for terminal fails isolate to the malfunction nearest to Digital Data Computer No. 1 on the avionic mux bus. Additional troubleshooting may be required to isolate to the second defective wire/component.

Avionic Mux Bus 2Y Schematic (A1-F18AC-741-500, WP005 00) may be used as an aid when doing this procedure.

For component locator, refer to WP006 00.

Malfunction is caused by one of the items below:

Aircraft Wiring
Cable Assembly

| Procedure	No	Yes
a. Do substeps below:		
(1) Open door 3 (A1-F18AC-LMM-010).		
(2) Disconnect radar disconnect 05P02 from bulkhead.		
(3) Open radome (A1-F18AC-LMM-000).		
(4) Disconnect:		
1▸ 07P06 from Computer-Power Supply CP-1325/APG-65.		
2▸ 04P05 from Radar Data Processor CP-2062/APG-73.		
(5) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
1▸ 05P02 pin 47 to 07P06 pin 68 05P02 pin 57 to 07P06 pin 69		
2▸ 05P02 pin 47 to 04P05 pin 3 05P02 pin 57 to 04P05 pin 2		
Does wiring test good?	b	c
b. Replace pantograph assembly (A1-F18AC-742-300, WP013 00), and do step f.	-	-

Table 1.   Multiple Terminal Fail Troubleshooting (Continued)

Procedure	No	Yes
c. Do substeps below:		
(1) Open door 6 (A1-F18AC-LMM-010).		
(2) Disconnect 52P-A046 from bulkhead (door 6).		
(3) Using time domain reflectometer (A1-F18A( )-WRM-000) and table 2, test wiring from:		
60J-A001B pin 47 to 52P-A046 pin 52 60J-A001B pin 57 to 52P-A046 pin 53		
Does wiring test good?	d	e
d. Isolate and repair defective aircraft wiring (A1-F18A( )-WDM-000) from:		
60J-A001B pin 47 to 52P-A046 pin 52 60J-A001B pin 57 to 52P-A046 pin 53		
and do step f.	-	-
e. Repair defective aircraft wiring (A1-F18A( )-WRM-000) from:		
▭1▶ 52J-H046 pin 52 to 77P-L001G pin S002 52J-H046 pin 53 to 77P-L001G pin S003		
▭2▶ 52J-H046 pin 52 to 80P-L025D pin S005 52J-H046 pin 53 to 80P-L025D pin S006		
and do step f	-	-
f. If disconnected, removed, or opened during this procedure, make sure the items listed below are connected, installed, or closed:		
(1) 04P05		
(2) 05P02		
(3) 07P06		
(4) 52P-A046		
(5) Doors 3 and 6		
(6) Radome	-	-
LEGEND		
▭1▶ F/A-18A before F/A-18 AFC 292 and F/A-18B.		
▭2▶ F/A-18A 162394 thru 163175 after F/A-18 AFC 292.		

Table 2.   Avionic Mux Cable Parameters

Cable Number	Connector	Imped-ance (Ohms)	Dielectric Type	Cable Length (Inches)
—	☐3▶ 05P02 pin 47 to 07P06 pin 68	68	PTFE	93
—	☐3▶ 05P02 pin 57 to 07P06 pin 69	68	PTFE	93
—	☐4▶ 05P02 pin 47 to 04P05 pin 3	68	PTFE	93
—	☐4▶ 05P02 pin 57 to 04P05 pin 2	68	PTFE	93
U507Y	60J-A001B pin 47 to 52P-A046 pin 52	68	PTFE	149 ◀1☐ 151 ◀2☐
U508Y	60J-A001B pin 57 to 52P-A046 pin 53	68	PTFE	149 ◀1☐ 151 ◀2☐

LEGEND

☐1▶   F/A-18A.

☐2▶   F/A-18B.

☐3▶   F/A-18A before F/A-18 AFC 292 and F/A-18B.

☐4▶   F/A-18A 162394 thru 163175 after F/A-18 AFC 292.